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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JUNE, 1955

Back-Draft Endangers Winston-Salem, N. C., Firemen
(Story on page 545)

A CASE - SHEPPERD - MANN PUBLICATION

Swimming is great... but

are you ready

with the most effective artificial respiration known to science?

EMERSON

EMERSON
Resuscitators

"Simplest and Safest"

J. H. EMERSON CO.

This background is an actual photo of the Anechoic chamber wall.

The superior features that are built into the outstanding line of FEDERAL Sirens and Lights, are not accidental They are the results of FEDERAL'S years of conscientious effort, of planning, developing and producing the finest, most dependable warning signals that money can buy.

During more than 50 years, FEDERAL has continuously expanded its research. Just recently completed is a new ANECHOIC (echo-free) TEST CHAMBER that teaches many new things about sound and the creation of sound; it has shown how to improve fine products already in existence and how to develop finer new ones. An example is the development of FEDERAL'S now famous Beacon Ray light which was developed through similar research into the aspects of light.

FEDERAL'S research and development program is continuously growing and expanding, providing its customers with better "tried and tested" FEDERAL protective devices. There are no finer, more dependable warning signals than the FEDERAL Q Siren and the FEDERAL Beacon Ray light.

Be sure to specify **all** FEDERAL warning equipment for your new apparatus.

FEDERAL

formerly: Federal Enterprises, Inc.

SIGN and SIGNAL Corporation

2702 S. State St., Chicago 19, Ill.

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING. THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

D. PEDERSEN
Editorial Assistant

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MEMBER
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Associated Business Publications

Old Friends—New Ideas

THIS is fire service conference and convention time; the season of reunions, meetings and elections; the gathering of the clans for pleasure and profit; the renewal of old acquaintances and friendships, and the making of new; the search for the latest ideas in the vast, complicated business of fire suppression.

● It is interesting—and gratifying to us, to note the place FIRE ENGINEERING has in these many activities. Seldom is there a business or educational session but what this Journal is referred to or quoted as an authority.

● Not only does FIRE ENGINEERING bring to these conferences this essential factual data, but it provides refreshing, up-to-the-minute news about the fire service, and those who make its plans and policies, both the convention-eers and the stay-at-homes.

● In a sense, every issue of FIRE ENGINEERING is a convention-in-print. A convention you can enjoy in your home, or at your headquarters. Its advertising pages post you on the latest developments in fire fighting equipment; its editorial pages inform you on how these facilities are used.

● By all means personally attend the conferences of your favorite fire service associations and groups. But rely upon FIRE ENGINEERING to bring you not just yearly, but *every month* the *what, why, where, when and how* of fire control and extinguishment—yes, and fire prevention.

The Publishers

FIRE ENGINEERING

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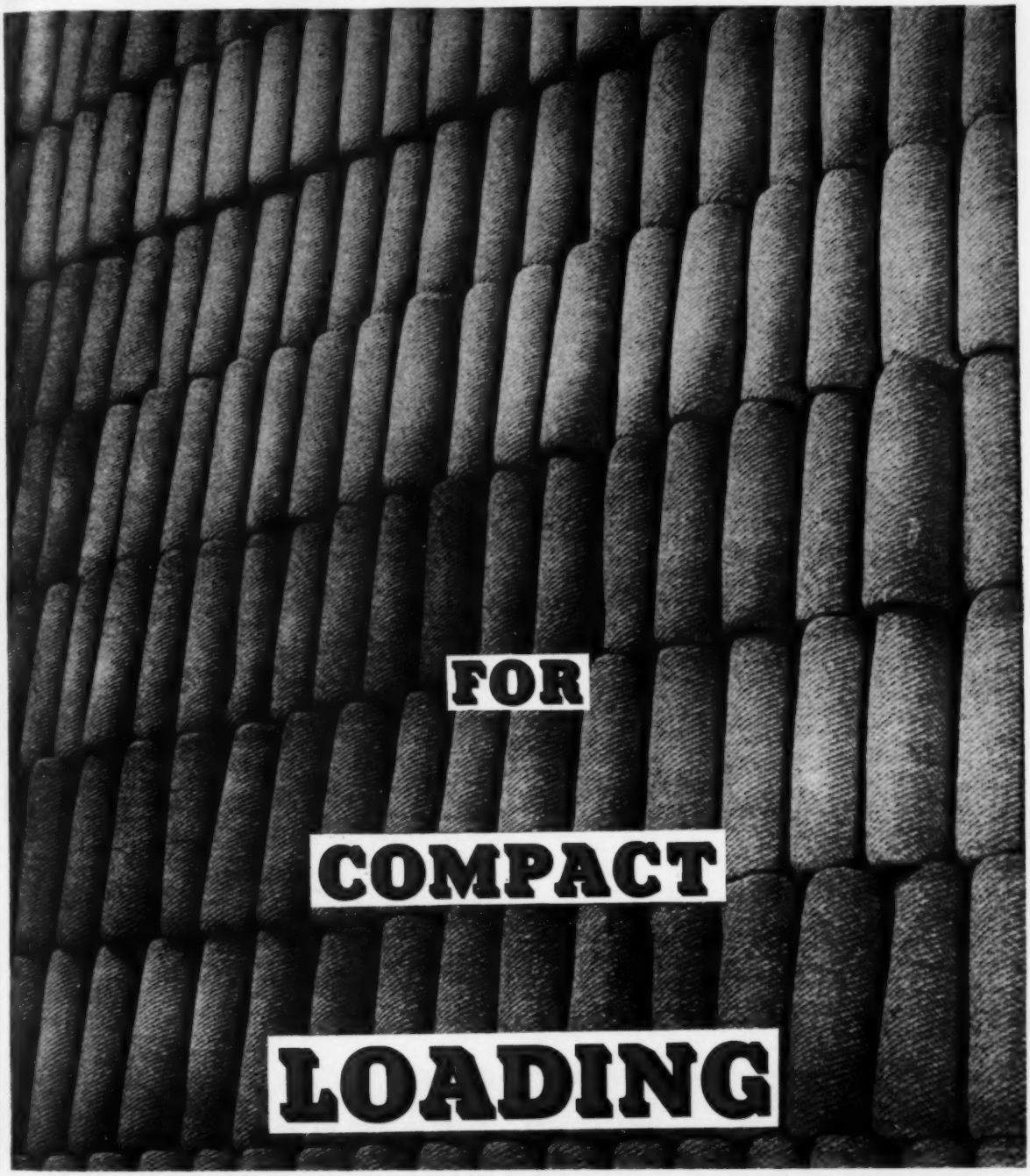
"*Specialized* Leadership"

FABRILON



FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT

IN CANADA BICKLE-SEAGRAVE, LTD. WOODSTOCK, ONTARIO

A FLIP OF THE SWITCH

ADDS PUBLIC ADDRESS

to MOTOROLA'S "Big Voice" Fire Radio

With this new plus feature the Motorola "Big Voice" Fire Radio does *double duty* — as a 2-way radio *or* as a public address system, switching back and forth in a split second.

Either way it's used, noises at the scene can't drown out messages, thanks to the "Big Voice" that is 10 times more powerful than conventional mobile radio units . . . contact between all units is *never* lost. The dash mounted volume control is easily adjusted to any desired level.

In Motorola's perfectly integrated system the "Handie-Micro-Talkie" transmitter can also be used as a "wireless microphone" for giving on-the-spot instructions over the "Big Voice" loudspeaker.

Let a Motorola radio communications engineer show you how Motorola Fire Radio has increased the efficiency of other fire systems and can help yours. Mail the coupon TODAY.

MOTOROLA COMMUNICATIONS AND ELECTRONICS, INC.
4501 Augusta Blvd. • Chicago 51, Illinois

Please Address Dept. FE

Please provide more information on the "Big Voice" fire radio package with built-in public address system.

NAME_____

TITLE_____

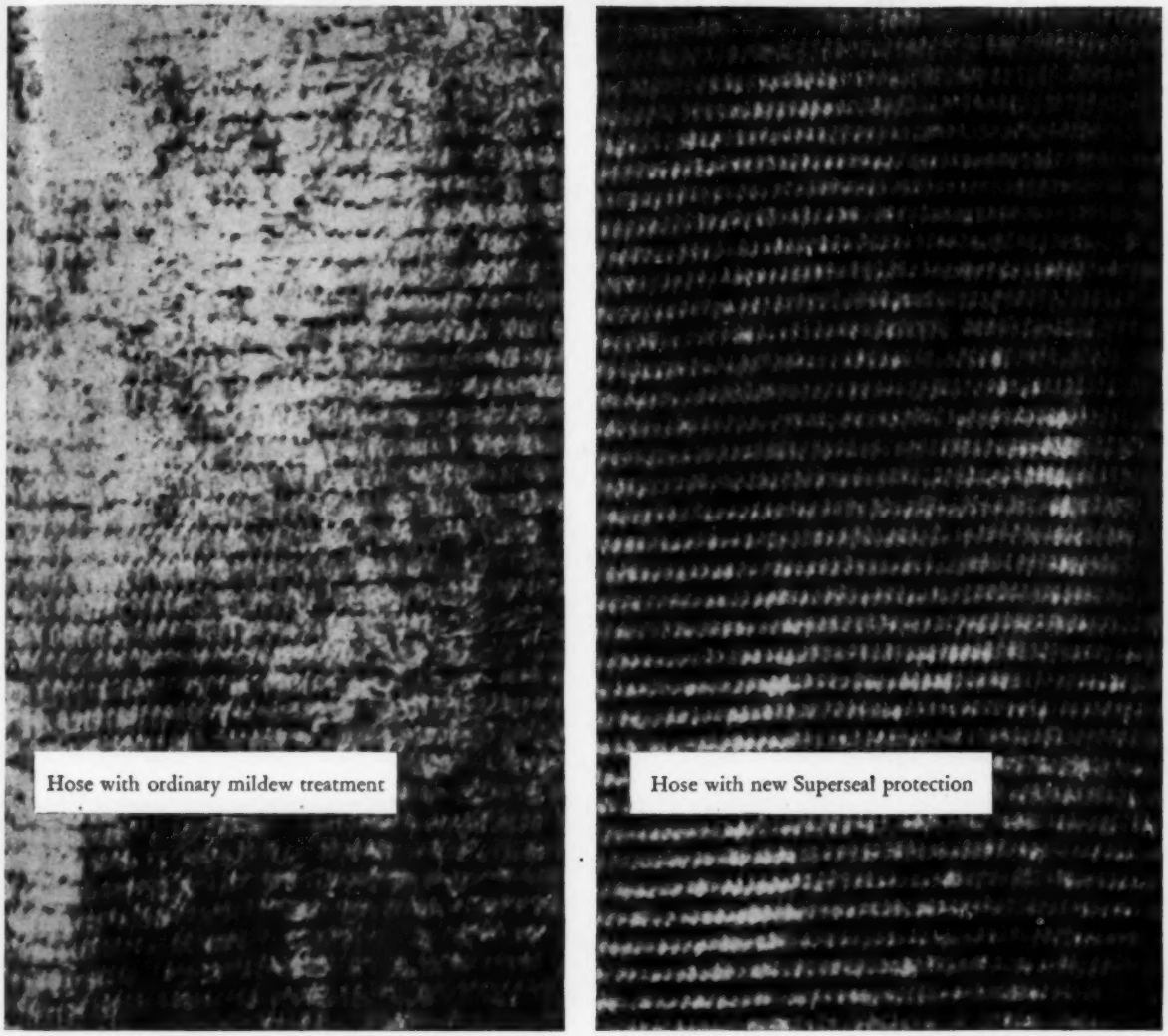
ADDRESS_____

CITY_____ ZONE_____ STATE_____

Motorola
2-WAY FIRE RADIO

Motorola consistently supplies more mobile radio than all others combined.
Proof of acceptance, experience and quality.
The only COMPLETE radio communications service— specialized engineering . . . product . . . customer service . . . parts . . . installation . . . maintenance . . . finance . . . lease.
"The best costs you less — specify Motorola".

B. F. Goodrich announces



New treatment makes hose 10 times more resistant to mildew attack

HERE'S proof that the new Superseal fire hose treatment, recently announced by B. F. Goodrich, resists moisture absorption and mildew attack 10 times more effectively than any other treatment.

Three lengths of hose were buried in a plot of ground that had been infested with mildew spores, maggots and microbes. After 8 weeks, the untreated hose (not shown here) was reduced to powder. The hose treated the old way (at left, above) wasn't much better—couldn't hold water. But the hose on the right, with B. F. Goodrich Superseal protection, looked good as new, still had 96% of its original strength.

This new B. F. Goodrich treatment is not just a surface application. The chemical solution penetrates and protects every cord in both the inner and outer jackets, prepares the hose for all sorts of weather. And, unlike ordinary treatments, the B. F. Goodrich process actually *increases* the adhesion between jacket and tube. And, in addition, it gives extra safety because the chemical makes B. F. Goodrich hose more flame-resistant.

Next time you need fire hose, order B. F. Goodrich and specify Superseal. It costs no more than ordinary treatments, but gives you maximum protection against mildew attack, rotting and freezing.

There's a B. F. Goodrich fire hose distributor near you, ready to bring this and other B. F. Goodrich hose improvements to your department. Give him a call or write *The B. F. Goodrich Company, Dept. M-434, Akron 18, Ohio.*

B.F.Goodrich
INDUSTRIAL PRODUCTS DIVISION

ELECTRIC POWER

DELCO-REMY A.C. GENERATORS FOR EXTRA-HEAVY ELECTRICAL LOADS

Delco-Remy's new 6- and 12-volt A.C.-D.C. charging systems are the answer to the *extra-heavy* electrical demands of late-model fire engines, and other vehicles equipped with two-way radio, floodlights, or other special electrical units. High wattage output is ample for heaviest electrical loads . . . generators pick up discharged batteries quickly in emergencies. Delco-Remy A.C.-D.C. charging systems are unexcelled at curb-idle . . . furnish up to 180 amperes at higher engine speeds . . . are dependable under the most rugged operating conditions at all engine speeds.

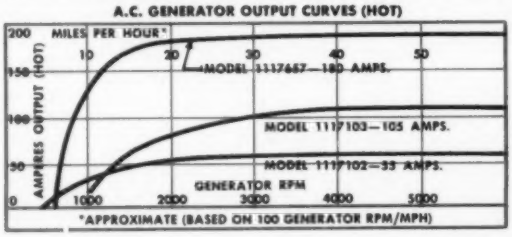
Application packages for both 6- and 12-volt generators, complete with installation instruction sheets for popular makes of cars and trucks, are available. Conversion is simple. Specify Delco-Remy A.C.-D.C. systems on your new apparatus. See your nearest United Motors Distributor for generator applications on existing vehicles.

A.C. GENERATOR PERFORMANCE DATA (HOT)

Model	Volts	Cut-In RPM	Engine Idle Amperes*	Maximum Amperes	Power Watts SAE	Recommended For
1117102	12	525	39	55	825	All speeds.
1117103	12	960	5	105	1575	All speeds.
1117657	12	550	130	180	2700	All speeds.
1117062-3-4	6	750	38	90	720	All speeds.

*APPROXIMATE (BASED ON 1000 GENERATOR RPM)

A.C. GENERATOR OUTPUT CURVES (HOT)



DELCO-REMY D.C. GENERATORS FOR MEDIUM-TO-HEAVY ELECTRICAL LOADS

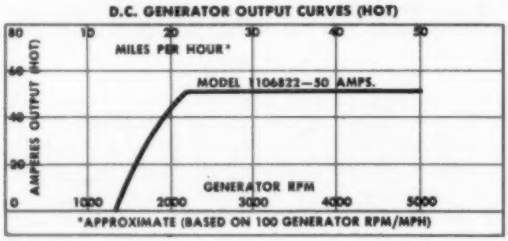
Delco-Remy's 12-volt extra-output D.C. generator is an economical answer to the electrical needs of late-model fire engines . . . other vehicles with additional lights, two-way radios, or other special electrical equipment in medium- to heavy-duty service in suburban areas. Delco-Remy extra-output D.C. generators are low in cost, simple to install, economical to maintain. Performance data on a typical Delco-Remy 12-volt D.C. generator are shown at the right. Specify Delco-Remy extra-output generators on your new apparatus. For further details and generator application data on existing vehicles, see your nearest United Motors Distributor.

D.C. GENERATOR PERFORMANCE DATA (HOT)

Model	Volts	Cut-In RPM	Curb Idle Amperes*	Maximum Amperes	Power Watts SAE	Recommended For
1106822	12	1300	0	50	750	Low to Medium Speeds

*APPROXIMATE (BASED ON 1000 GENERATOR RPM)

D.C. GENERATOR OUTPUT CURVES (HOT)

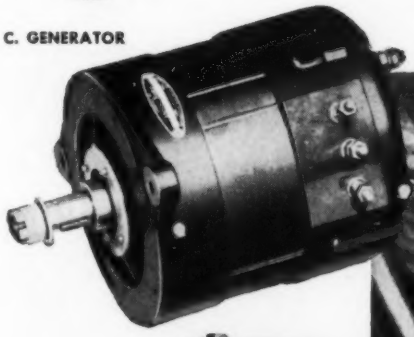


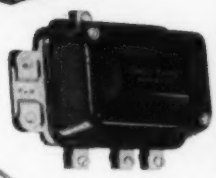
Delco-Remy
ELECTRICAL SYSTEMS

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA

right for the job

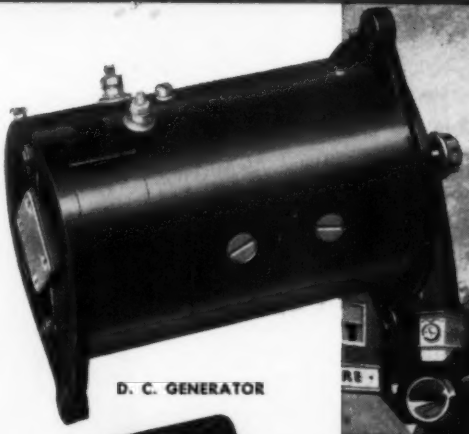
A. C. GENERATOR



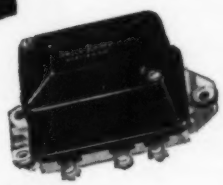


REGULATOR

RECTIFIER



D. C. GENERATOR



REGULATOR

A GENERAL MOTORS PRODUCT GM GENERAL MOTORS UNITED SERVICE MOTORS A UNITED MOTORS LINE

DISTRIBUTED BY WHOLESALERS EVERYWHERE

MIDWESTERN

Safety Clothing for FIREMEN

The Original

STRIPED SAFETY COAT

- Greater Visibility
- Exclusive Safety Features
- Exclusive Fabric Material
- Superior Design

The striped safety coat for firemen is an *original* MIDWESTERN development . . . featuring highly visible yellow stripes which are *rubberized as part of the material* . . . not painted, glued or sewed on!

Service records prove that Midwestern Striped Safety Coats withstand years of rugged duty . . . offer high safety visibility during the entire life of the garment. Designed exclusively for firemen . . . every detail in construction adds to the service, comfort, protection and long wear of the garment.

As an accident prevention measure, more and more fire departments are specifying Midwestern Striped Safety Coats as standard equipment. There are many imitations but *no substitute* for the workmanship, built-in comfort and longer wear you receive by specifying MIDWESTERN.

MIDWESTERN COMBINATION SAFETY SUIT

The Midwestern Safety Coat and Bunker Pants combination is preferred by many larger municipal departments. Detachable wool linings. Close fitting collar and elastic inner sleeve on coat keep out sparks and water. Pants have double-stitched seams, reinforcing rivets at points of strain, large, roomy pocket space.

QUALITY UNEXCELLED

In our vast selection of materials you will find the type of fabric exactly suited to your climate and needs. For complete information, have your Midwestern dealer show you our complete line. A letter to the factory will also bring you literature and material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

Why American Fire Apparatus OFFERS MORE OF WHAT YOU WANT THAN ANY OTHER APPARATUS BUILDER

FIRST, American listens to *your* needs—and is prepared to build apparatus tailored to suit *your* community—*your* local fire-fighting problems and methods.

THEN American offers you a *choice of chassis.* You select the make you prefer for service in your locality. Of the six recently completed trucks above, for example, four different makes are represented.

YOU can specify either a front-mounted or midship-mounted Barton-American pump . . . single, two or four-stage types. Pressures to 1,000 lbs., capacities to 1,000 gallons.

AMERICAN leads the field with major engineering advances and has originated many exclusive design refinements that increase fire-fighting effectiveness, simplify the fireman's job and reduce maintenance.

UNDIVIDED responsibility for the entire unit is accepted by American. You are assured of correctly integrated, smooth functioning apparatus that performs to specifications.

AMERICAN builds only excellent quality apparatus you can operate with pride for years to come.

TO BUILD such units, American has the finest of plant facilities and skilled workmen . . . plus unequalled testing equipment. Every unit must pass rigid, exhaustive performance tests before delivery.

YES, American *does* offer—and *deliver—more* of what you want in fire-fighting equipment. Ask for a specific proposal . . .

Contact your nearest American Representative soon!

American

AMERICAN FIRE APPARATUS CO.

FIRE APPARATUS CO.

Main Office: Main Street Road, Battle Creek, Mich. • Plants at: BATTLE CREEK, MICH. • MARSHALLTOWN, IA.

Cut Traffic Hazards

with THE "OVERHEAD DOOR"

TRADE MARK

RESIDENTIAL • COMMERCIAL • INDUSTRIAL

A weathertight "wall" when closed!

NEW ELECTRIC OPERATORS for The "OVERHEAD DOOR" provide for easy installation and maintenance. 24-volt control systems eliminate hazards of high voltage. Simple manual release disconnects operator from door in case of power failure. The touch of a button opens doors; timing device can close them when trucks are out. All models adaptable to time-saving electronic control.

Plan "*Drive Through*" Fire Stations!

The "OVERHEAD DOOR," installed in opposite walls of fire stations, can eliminate tedious backing in—keep your equipment ready for instant use—avoid traffic tie-ups. Already used in modern truck maintenance shops, bus terminals and public garages, it is equally effective for fire stations, highway maintenance garages and other municipal buildings on busy streets.

WEATHERTIGHT—Easy to Open and Close!

The "OVERHEAD DOOR" with Miracle Wedge* construction saves heat, is weathertight and tamper-proof when closed, yet opens up a whole wall for fast exits.

*TRADE-MARK

Specify The "OVERHEAD DOOR" when planning new buildings or modernizing. Look for this trade-mark in your phone book and call your local dealer for details today.

©1955, O.D.C.

OVERHEAD DOOR CORPORATION

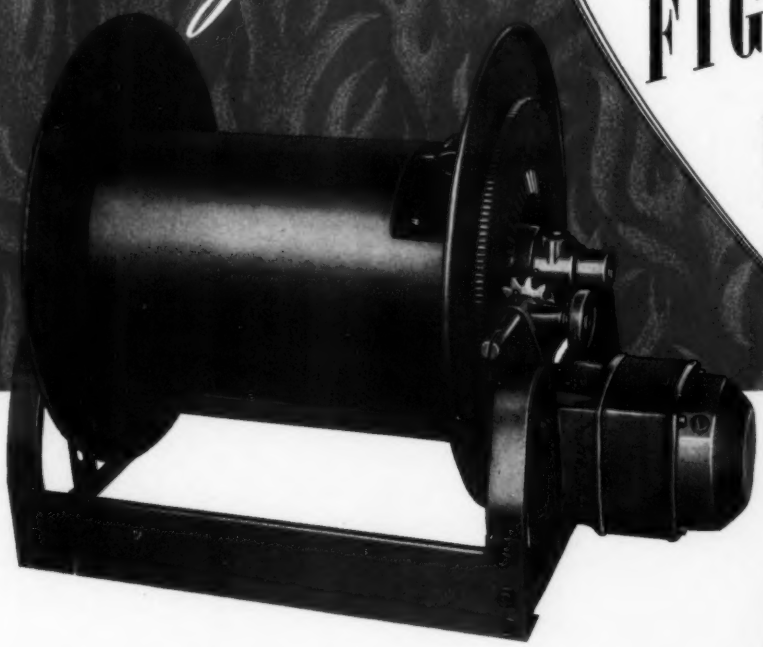
General Offices and Main Factory • Hartford City, Indiana

Manufacturing Divisions:

Hillside, New Jersey Cortland, New York Dallas, Texas Portland, Oregon
Oklahoma City, Oklahoma Nashua, New Hampshire Lewistown, Pennsylvania

NATION-WIDE Sales • Installation • Service

the very best ...FIRE FIGHTING REEL



Safe
Swift
Sure
Precision built
Underwriters' Approved
Competitively priced

THERE ARE MANY REASONS for the superior performance of Ardmore Fire Fighting Reels — many reasons why it pays to specify Ardmore. Here are just a few of these reasons: Ardmore's explosion-proof motors are of exclusive design, Underwriters' Approved for all electrical systems. These motors are compact, powerful, and efficient. They draw only 70 amps. Direct gear-to-gear drive assures positive power transmission.

Frames are of channel steel, end-welded and angle braced — extra strong, yet flexible enough to absorb road shocks. Time-proven 600PSI ball bearing swing joints are free-running, full flow, non-leaking, and readily accessible. 16 models. Distributors in principal cities. Complete catalog on request. Write, wire, or phone.

FIRST
in value

FIRST
in performance

FIRST
in excellence of design and manufacture.

ardmore products
Division of Amco Corporation

2040 Carroll Avenue
Chicago 12
Haymarket 1-2718

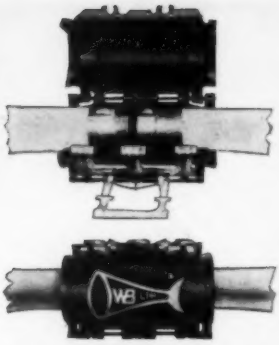
PRODUCTS ENGINEERED AND DESIGNED TO FIGHT FIRES!

HOSE ROLLER

Constructed of Wooster-lite alloy with bronze bushing and cold rolled steel pins and rope hook. This roller weighs less than 10 lbs. It is 13" long and 8" wide and high. Most departments are now specifying this hose roller on all their pumper specifications as well as ladder trucks.

TRUMPET HOSE CLAMP

Extremely light, self-locking, quickly attached, easy to shut down charged line without extra pressure surge. Opening is steady and controlled.



TRUMPET HOSE JACKET

The Wooster-lite alloy used in this jacket will not crack or break in service. The liner of tough, live synthetic rubber is so constructed that under pressure all joining edges are sealed tight. Spring latch snap locks shut positively with one easy motion. Available in 1½" and 2½" sizes.

UNIVERSAL TRUMPET SPANNER

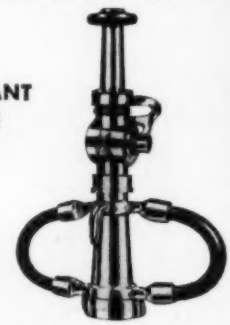
In addition to having the tapered head which fits all types of lugs on couplings from ¾" thru 4", this wrench has a very efficient "jimmy" and gas cock shut-off key.

UNIVERSAL HYDRANT WRENCH AND SPANNER

This wrench head is designed to take all types of pentagon, octagon or square hydrant nuts, since the screw handle is adjustable to compensate for size. The spanner hook takes all couplings from ¾" through 4".

LITTLE GIANT PLAY PIPE

(PGL-BN-T5R)



With cushion ball shut-off and 6" std. threaded tip and rubber bumper.

OSCILLATING HYDRANT PUMP

An ideal, inexpensive hydrant pump which can be relied upon to always work regardless of weather conditions. The base of the pump is adapted to fit and lock on any pentagon or square hydrant. The stainless steel shaft resists scoring, pitting, and corrosion.

GEYSER TURRET NOZZLES

Operate safely at lower elevation ranges than other portable units. Fully adjustable elevating range. Can be turned in complete circle horizontally.

Rotatable mounting fixture intended for carrying nozzles on top of apparatus for use as rigid deck pipe. May be quickly dismounted for portable surface use. Base Plate 20" x 20", conventional post height 4".

WOOSTER BRASS

WOOSTER, OHIO

A DIVISION OF THE FYR FYTER COMPANY

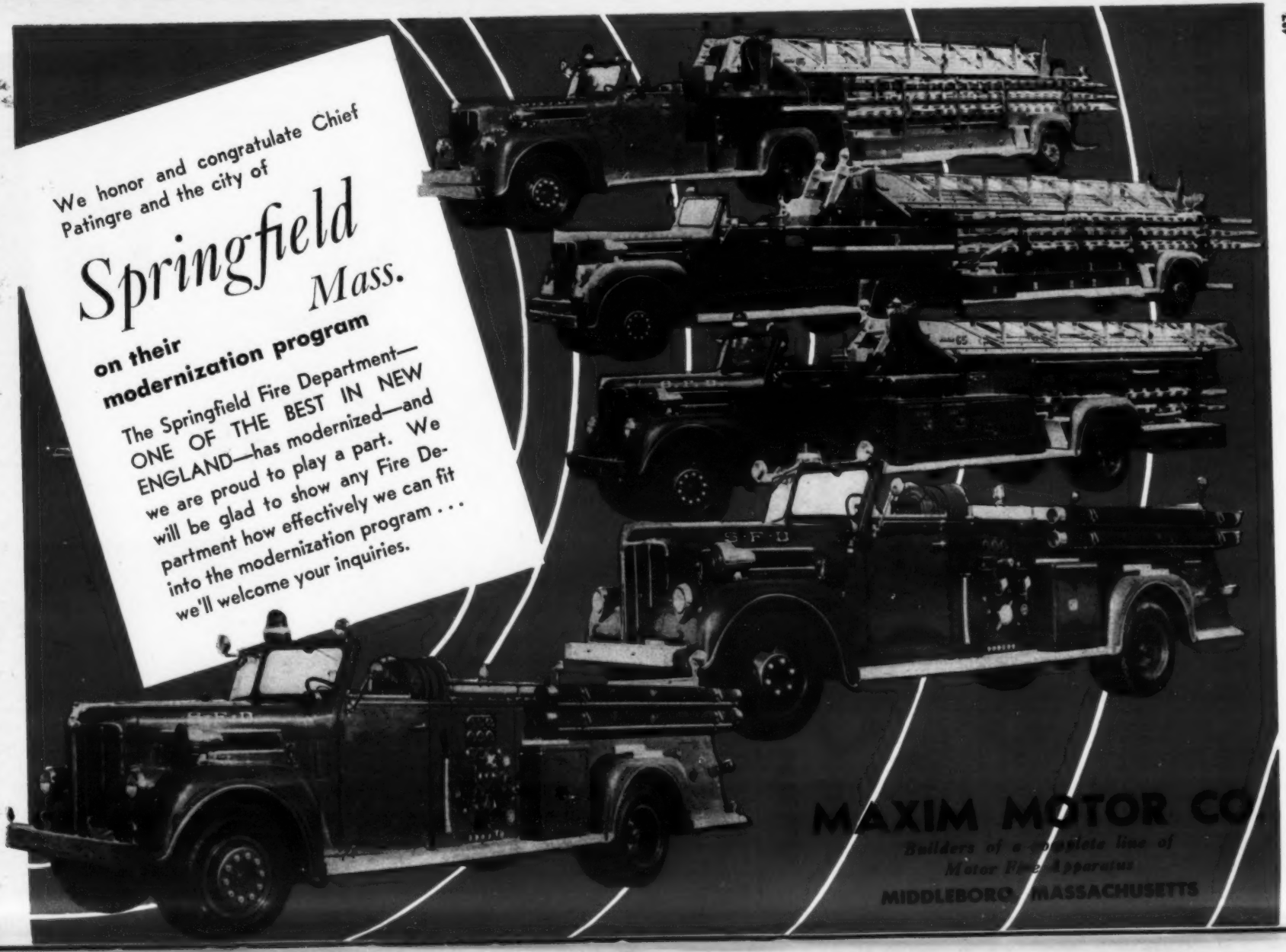

We honor and congratulate Chief Patingre and the city of
Springfield Mass.
on their modernization program
The Springfield Fire Department—ONE OF THE BEST IN NEW ENGLAND—has modernized—and we are proud to play a part. We will be glad to show any Fire Department how effectively we can fit into the modernization program . . . we'll welcome your inquiries.
MAXIM MOTOR CO
Builders of a complete line of Motor Fire Apparatus
MIDDLEBORO, MASSACHUSETTS

Photo Courtesy of Seco Safety Products Co.

Flat-Folding, Rubber-Lined Hose For Quick, Sure Action Protection

Qua-Flex fire hose is specially constructed to fold flat. This makes it highly adaptable for storage on racks, even those designed for unlined linen hose. When hose is pulled from rack, pins drop easily and hose does not kink. It takes up less space than most other types of fire hose. That's why it's so popular for fire protection service in office buildings, institutions, industrial plants, ships, or wherever space is limited. It is quickly and easily dried after use; hence frequent testing doesn't damage it.

This hose is ideal for use with a fog nozzle—an advantage over linen hose, and one that is usually found only in larger, heavier hose.

The tube is made of a slow-aging, non-acid-forming, synthetic rubber compound that always remains resilient, resists cracking and stays leak-proof. The jacket is evenly woven of long staple cotton yarn. Tube and jacket are tightly bonded together for strength and long life.

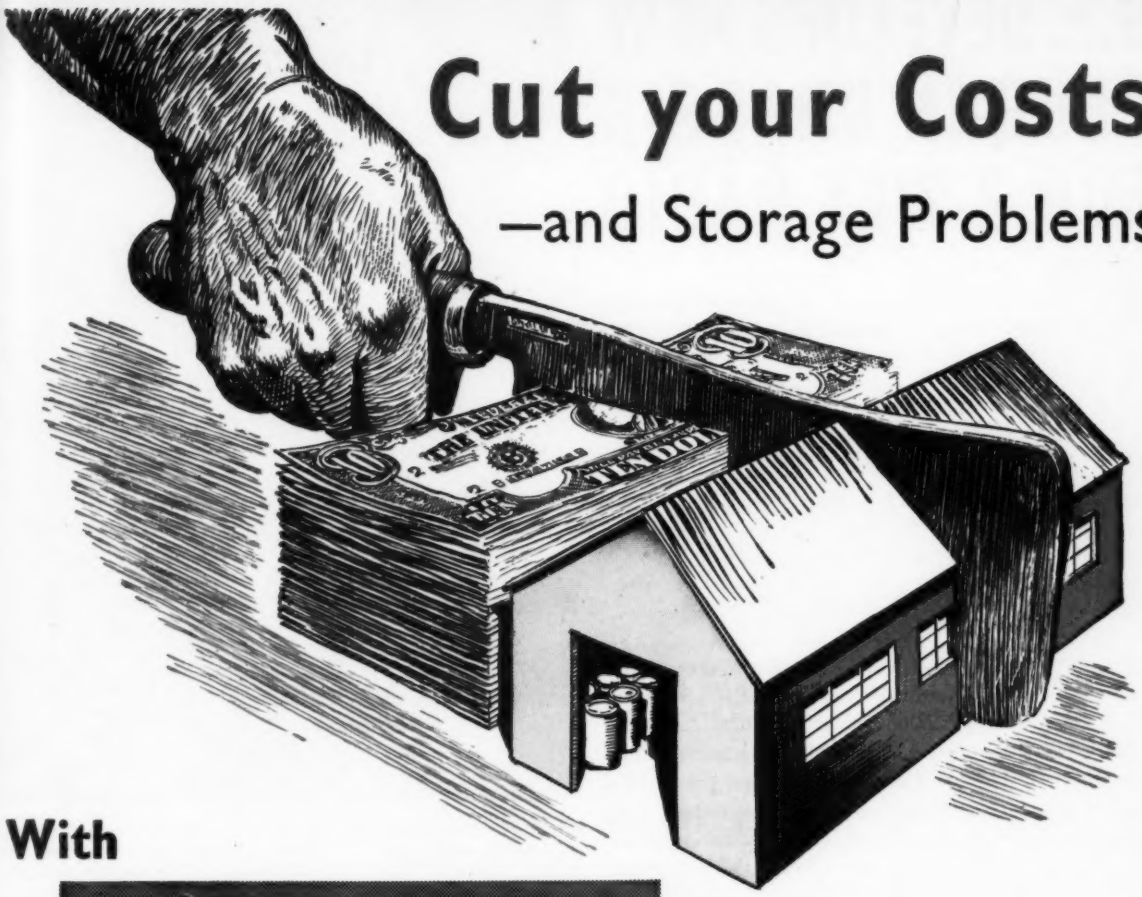
Qua-Flex is available in I.D. sizes 1½", 2" and 2½", all guaranteed to withstand a test pressure of 300 p.s.i., in 25, 50, 75 and 100 foot lengths. Popular 1½" size has Factory Mutual Approval.

We also manufacture a complete line of industrial and municipal fire hose, as well as a complete line of industrial rubber products: belting, hose, packing and moulded rubber of every construction for every need. *Through your Quaker and Quaker Pioneer distributor* our research and engineering services are always available to help you solve any fire protection or industrial rubber problem. *Write for free folder and name of nearest distributor.*

QUAKER RUBBER CORPORATION
Philadelphia 24, Pennsylvania

a division of H.K.P.

QUAKER PIONEER RUBBER MILLS
San Francisco 7, California



Cut your Costs

—and Storage Problems

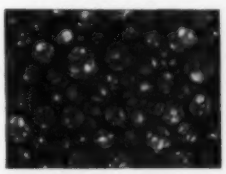
With

Nicerol

3% Foam Compound

THREE GALLONS of Nicerol and 100 gallons of water will produce over 1,000 gallons of Nicerol foam through a mechanical air pump. Changing and replacing strainers is reduced to a minimum, as Nicerol does not form sludge even after long storage. Its pH of 6·8 to 7·3 indicates neutrality, thus ensuring freedom from corrosion in valuable equipment, and in storage drums. A less obvious factor in Nicerol economy is its speed of effective action. Nicerol saved several hundred million dollars in World War II, and is still supplied under contract to several Navies and Air Forces throughout the World.

Magnification X 30



Here's why Nicerol Air Foam gives greater heat resistance

The minute closely-knit bubbles retain the maximum water content in a foam that is both adhesive and cohesive. This is the reason that air foam made from Nicerol resists fire breakdown, puts out more fire faster, and definitely outlasts the fire to prevent flash-backs.

***Nicerol*—THE LONGER LASTING AIR FOAM**

Keeps longer in storage — Puts out more fire faster — Outlasts the fire

INQUIRIES INVITED FROM DISTRIBUTORS AS WELL AS USERS. FULL TECHNICAL AND COMMERCIAL DETAILS AVAILABLE FROM

GEORGE T. REYNOLDS & ASSOCIATES, P.O. BOX 395, THORNWOOD, N.Y., U.S.A.

BRITISH FIRE EXTINGUISHERS LTD., 222 SIMCOE ST., TORONTO 2B, ONT., CANADA

G.E. DEVELOPS NEW PLUG-IN CHASSIS FOR 2-WAY RADIO

NEW PROGRESS LINE saves money on maintenance through faster servicing—protects from obsolescence because chassis are quickly interchangeable.

IN the new Progress Line, transmitter, receiver, power supply and optional chassis are individually rack-mounted in a triple-rigid mobile case. Rapid interchangeability is provided by this rack construction and true plug-in chassis. This plug-in design permits changes in frequency, power, type of reception (narrow or wide band) quickly *at minimum cost, at any time.* You're free of any obsolescence risk!

You may switch Progress Line mobile units—whether front or trunk mount, between vehicles with 6 or 12 volt DC systems. No electrical alterations are needed. And any mobile combination can be converted quickly to a low-cost, 117 volt AC intermittent duty base station by changing only the power supply chassis!

Let a G-E Communications Counselor analyze your radio needs and develop an installation or conversion program planned for long-run savings. Write or call today for full specifications on the new PROGRESS LINE. *General Electric Company, Communication Equipment, Section X5965, Electronics Park, Syracuse, N. Y.*

INDIVIDUAL PLUG-IN CHASSIS minimize capital investment in spares and reduce radio maintenance time! Your vehicles will be back "in service" faster. For instance, you can replace either a transmitter or receiver plug-in chassis right in the vehicle in 5 minutes—using only a screwdriver. Individual plug-in chassis of the new General Electric Progress Line units also provide complete interchangeability between mobile and station transmitters and receivers.

There is a G-E Authorized Service Station near you. Look for this sign.

EASY FRONT MOUNTING under the dash. The new G-E Progress Line case is less than 15" deep. For the first time you can have a 90-watt front mount mobile unit in the 25-54 MC band and a 50-watt front mount mobile unit in the 144-174 MC band. In the 25-54 MC band you can now have simultaneous monitoring of 2 channels, in the same case, without additional equipment.

Progress Is Our Most Important Product

GENERAL ELECTRIC

MICHIGAN CITY

gets twin pumpers

Michigan City's Fire Chief A. R. Mitchell accepting delivery of two pumpers from M. J. Dalton, Ward LaFrance representative.

Two WARD LaFRANCE pumpers

have just been put into service in Michigan City, Indiana. Specifications for pumpers for the city's progressive fire department were rigid . . . but Ward LaFrance met Michigan City's exacting requirements.

Fire Chief A. R. Mitchell selected Ward LaFrance model 120T pumpers as best suited to his community's conditions. The pumpers are each equipped with a heavy-duty engine, specially designed for fire apparatus. This quick-starting engine provides fast acceleration on runs, plus ample power to operate the 1000 GPM pump. Special equipment includes closed cabs, Beacon ray warning lights, folding ladders, 2½" gated suction intake, deck-mounted hose reels, extra side panel discharge gauges and compartment-type body.

Fire chiefs and commissioners who demand dependable equipment are turning more and more to Ward LaFrance. They have found our 37 years' experience building fire apparatus pays off in performance, reliability and low maintenance. Talk to your Ward LaFrance representative. He'll be pleased to help you plan equipment that suits your community's needs.

MID-WEST REPRESENTATIVES
Great Lakes Fire Equipment Co.
Barrington, Illinois

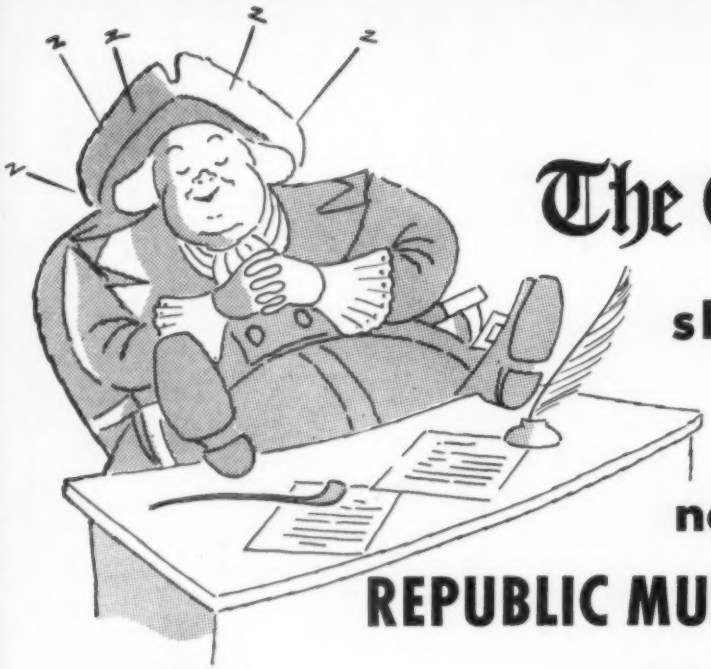
WARD LaFRANCE
TRUCK CORPORATION

Fire Apparatus Manufacturers for over 37 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue
Elmira, N.Y. Tel. 3-5631

DIRECT FACTORY BRANCH: 139th Street & Bruckner Blvd.,
New York 54, N.Y.
Tel. CYpress 2-3300

EXPORT: Ward LaFrance International, Inc.,
Elmira, N.Y., U.S.A.
Cable Address: "Wardtruck"



The City Fathers

sleep sounder . . .

now that they have

REPUBLIC MUNICIPAL FIRE HOSE

on the job

K-101
Champion:Dacron Filler
Double Jacket—400# Test Pressure

Municipal Fire Hose is constructed with specially selected Dacron or cotton yarns circular woven into strong reinforcing jackets for maximum bursting pressures and resistance to wear. Rubber linings are compounded for long service, wear and flexibility.

All brands have Provar Processing as standard construction for mildew prevention. Wax treatment—for protection against moisture absorption, adhesion of ice and freezing to ground during cold weather—can be supplied when specified.

All brands are flat-cured as standard procedure, permitting easier handling and storage of more footage.

Your inquiry is invited, and complete information will be sent promptly.

K-102
Tower:Dacron Filler
Double Jacket—
400# Test Pressure

K-122
Chariot:Cotton Filler
Double Jacket—
400# Test Pressure

K-127
Target:Cotton Filler
Double Jacket—
400# Test Pressure

REPUBLIC RUBBER DIVISION

LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO

INDUSTRIAL RUBBER PRODUCTS

Custom-Built to meet your needs

BASIC SPECIFICATIONS OF HOWE DEFENDER CHASSIS

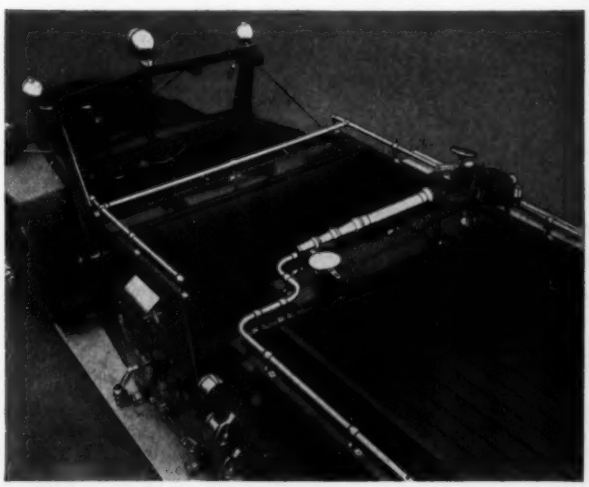
ENGINE—6 cylinder Continental, Waukesha or Hall-Scott
IGNITION—Dual, with 2 spark plugs per cylinder
STEERING—Ross cam and lever
TRANSMISSION—Fuller 5-speed forward
PROPELLER SHAFT—Spicer oversized for F.D. service
FRONT AXLE—Timken I Beam
REAR AXLE—Timken full floating. Ratio specially engineered for service requirements
CLUTCH—Lipe-Rollway oversized for F.D. service
BRAKES—Service-hydraulic with booster on 4 wheels. Auxiliary mounted on propeller shaft back of pump
TIRES—9.00 x 20 duals rear

FIRE EQUIPMENT

PUMP—Waterous with famous split case for easy servicing
BOOSTER TANK—Capacity optional. Standard construction completely removable top, made of steel with highest percentage copper content available, coated with 3-coat vinyl resin plastic
HOSE BODY—Heavy gauge stretcher leveled steel. Chromed hand rails side and rear
COMPARTMENTS—Full width over pump and large tool box. Others to order
WARNING SIGNALS and LIGHTING EQUIPMENT—Flasher siren, 2 hoselights, 2 spotlights, 2 headlights, pump panel light, 2 hand lanterns
FIRE EQUIPMENT—Set of ladders, 2 extinguishers, pump suction hose and fittings, axe, crow bar, pike pole, hose reel, 150 ft. booster hose and nozzle
FINISH—F.D. Red Lacquer, Gold Leaf lettering and striping

The 5-man, semi-cab of Aiken's new HOWE DEFENDER is shown in close-up at right. Rear seat takes three men off the running board for important riding comfort and safety. This is a triple combination pumper with 240 HP Waukesha engine. Its auxiliary 100 gallon power take-off pump works while truck is rolling.

WHEN you order new equipment, choose an experienced, old-line company building the latest and best apparatus on any chassis specified AND producing custom-built pumpers—the famous HOWE DEFENDERS! If you have a special problem, such as water supply, hilly terrain, serving of both city and suburban areas, a HOWE DEFENDER built to meet your individual needs is the answer. DEFENDERS are efficiently serving in such widely separated centers as Dallas, St. Louis, Fort Lauderdale, Muncie, Ind., Jamestown, N. Y. Let our engineers recommend the pumper to provide you with dependable, adaptable equipment.



HOWE

Member FAM (Fire Apparatus Manufacturers Association)

HOWE

"dependable fire apparatus since 1872"

FIRE APPARATUS COMPANY

Dept. FE6, 1400 W. 22nd St., Anderson, Ind., U. S. A.

The 50-foot length of hose on the left, made with Du Pont "Dacron", coils up more compactly than conventional hose (right). And hose made with "Dacron" is light in weight . . . easy to carry.

Easy-to-handle hose made with "Dacron" REG. U. S. PAT. OFF. is 5 to 8 pounds lighter per 50-foot length

says Chief J. C. Wilkinson, Augusta, Georgia, Fire Dept.

The hose on the left is made with "Dacron". It dries faster . . . is easy to coil and rack . . . and more of it can be carried on the truck because of its compactness.

"In January 1954, the Augusta Fire Department bought 6,000 feet of hose made with 'Dacron'," says Chief Wilkinson. "During the past 14 months we have found this hose to have many advantages. Hose made with 'Dacron' is superior to conventional hose because it dries faster and is easier to handle because of its light weight. What's more, it coils into a smaller roll and packs in a smaller space in a fire truck."

Fire departments across the country are reporting better all-round performance from hose made with Dacron* polyester fiber. Used as the load-carrying "filling" cord that reinforces the hose, this Du Pont fiber permits a hose that's light and flexible—yet *stronger* than ordinary hose of the same construction. And "Dacron" resists deterioration from mildew attack.

Du Pont makes "Dacron" yarn and supplies it to hose manufacturers. The combination of the unusual properties of "Dacron" plus hose manufacturers' skill has resulted in a superior fire hose. Hose made with "Dacron" is produced by all leading fire-hose manufacturers. Its superiority has been proved by years of field testing. The next time *you* need hose be sure it's made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

*Registered Trade-Mark For Du Pont's Polyester Fiber

ADVANTAGES OF FIRE HOSE MADE WITH "DACRON":

- Lighter
- Stronger
- More flexible
- Cuts loading time
- Saves space

DACRON

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

You can bet a fireman designed this pump!

From harness to shut-off nozzle, the Dragon Fire Pump is designed from the firefighter's point of view . . . has *everything* he wants in a back-pack pump. And it boosts his efficiency by cutting down fatigue.

The special Dragon harness is easy to get into and designed so the pump rides high on the fireman's back where it can't throw him off balance or interfere with walking or climbing. Just a few easy strokes of the pump lever gives the operator a *continuous* flow of water he can direct right where it does the most good. And a mere twist of the shut-off nozzle gives either solid stream or spray *instantly.*

Here's another advantage the firefighter appreciates! When he's using a Dragon Fire Pump, he can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool.

A Dragon Fire Pump comes *completely assembled* and requires little maintenance. There is no pump packing to dry out: even after standing idle for long periods, the pump is ready for instant use.

PARCO PRODUCTS COMPANY

PENNSBURG, PENNSYLVANIA

Dragon **FIRE PUMPS**

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

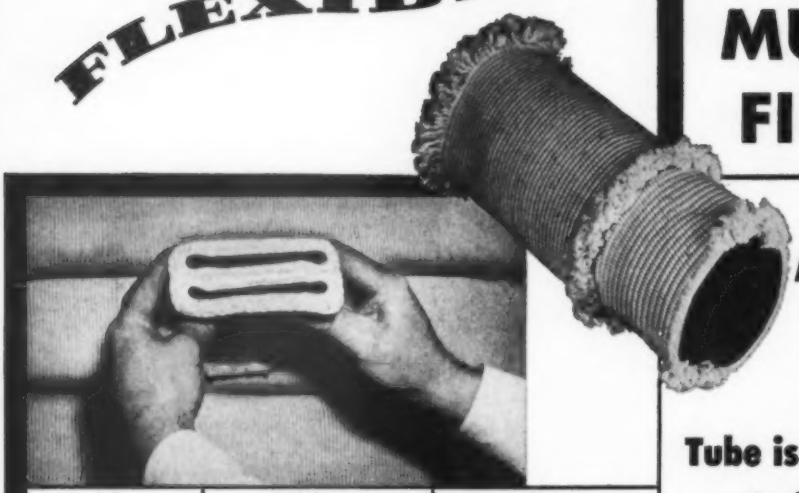
All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

FLEXIBLE

BI-ROLL MUNICIPAL FIRE HOSE



All Yarn in Bi-Roll Jacket is Antiseptically Treated.

Tube is Oxygen-Bomb Tested to Insure Long Aging

I. D. IN.	TEST PRESS. LBS./SQ. IN.	O. D. FOR COUPLINGS
1½	400	2"
2½	400	3 1/16"

Special Construction Provides Longer Life • • • Greater Flexibility • • • Greater Safety

Flat Fold Enables You to Store a Greater Amount of Footage in Truck Beds

BI-ROLL JACKET FEATURES

The Bi-Roll Jacket is circular woven in an atmospherically controlled room to insure balanced weaving. Long staple domestic cotton of standard length cords is used for inner and outer jacket. These cords are practically identical in weight which insures balanced construction. This means that twisting, writhing and elongation are minimized when the hose is under pressure.

The finished jacket is carefully inspected to insure freedom from knots, lumps and other imperfections. It can be treated with the Hewitt-Robins special wax and gum impregnation process which cuts down the jacket's water absorption factor—makes it freeze resistant and provides 100% resistance to mildew and rot. This wax and gum treatment gives the jacket a rich, golden hue and does not impair the flexible nature of the hose. Treated or untreated, Bi-Roll remains soft, strong and highly flexible.

BI-ROLL TUBE FEATURES

The tube in Bi-Roll Hose is made of properly vulcanized plantation rubber possessing slow aging, non-cracking, non-blooming, non-acid forming qualities, oxygen bomb-tested to insure long aging. Tube interior is extra-smooth and free of pinholes and pitting. This provides a friction-free passage for rapid flow of water through the hose.

The tube is not vulcanized to the jacket at point-of-fold. This construction helps to prevent cracking when hose is in storage . . . allows greater overall flexibility . . . permits a flatter fold—an important feature which makes it possible to store a greater amount of Bi-Roll in truck beds. This means you can speed more footage of hose to the fire scene with your present equipment . . . handle it easier and with greater safety. You can readily appreciate the additional fire fighting efficiency made possible by these features.

Hewitt-Robins

Conveyor Belting—Conveyor Machinery—Industrial Hose—Vibrating Screens—Vibrating Conveyors—Design, Manufacture, Engineering and Erection of Complete Bulk Materials Handling Systems.

HEWITT-ROBINS INCORPORATED • STAMFORD, CONNECTICUT

attention!

smaller cities, volunteer and industrial fire departments

here is the SEAGRAVE AERIAL LADDER

at an economical price

the Seagrave COMMERCIAL AERIAL LADDER

Now you can afford The Seagrave Aerial Ladder you have always wanted and needed . . . Here is the new all-steel Seagrave Aerial Ladder at an economy price . . . This ladder is ALL SEAGRAVE and has all the operational features of the Seagrave standard aerial . . . New one-hundred percent hydraulic mechanism and ladder. Seagrave body and controls. A considerable saving made possible by building the 65 foot ladder on a commercial truck chassis. No other aerial can equal its quality construction for the price . . . Mail the coupon today for complete information about the new Seagrave Commercial Aerial Ladder.

MAIL THIS COUPON!

Seagrave

the greatest name in fire apparatus

THE SEAGRAVE CORPORATION
DEPT. F.E. COLUMBUS 7, OHIO.
We are interested in your new aerial ladder.

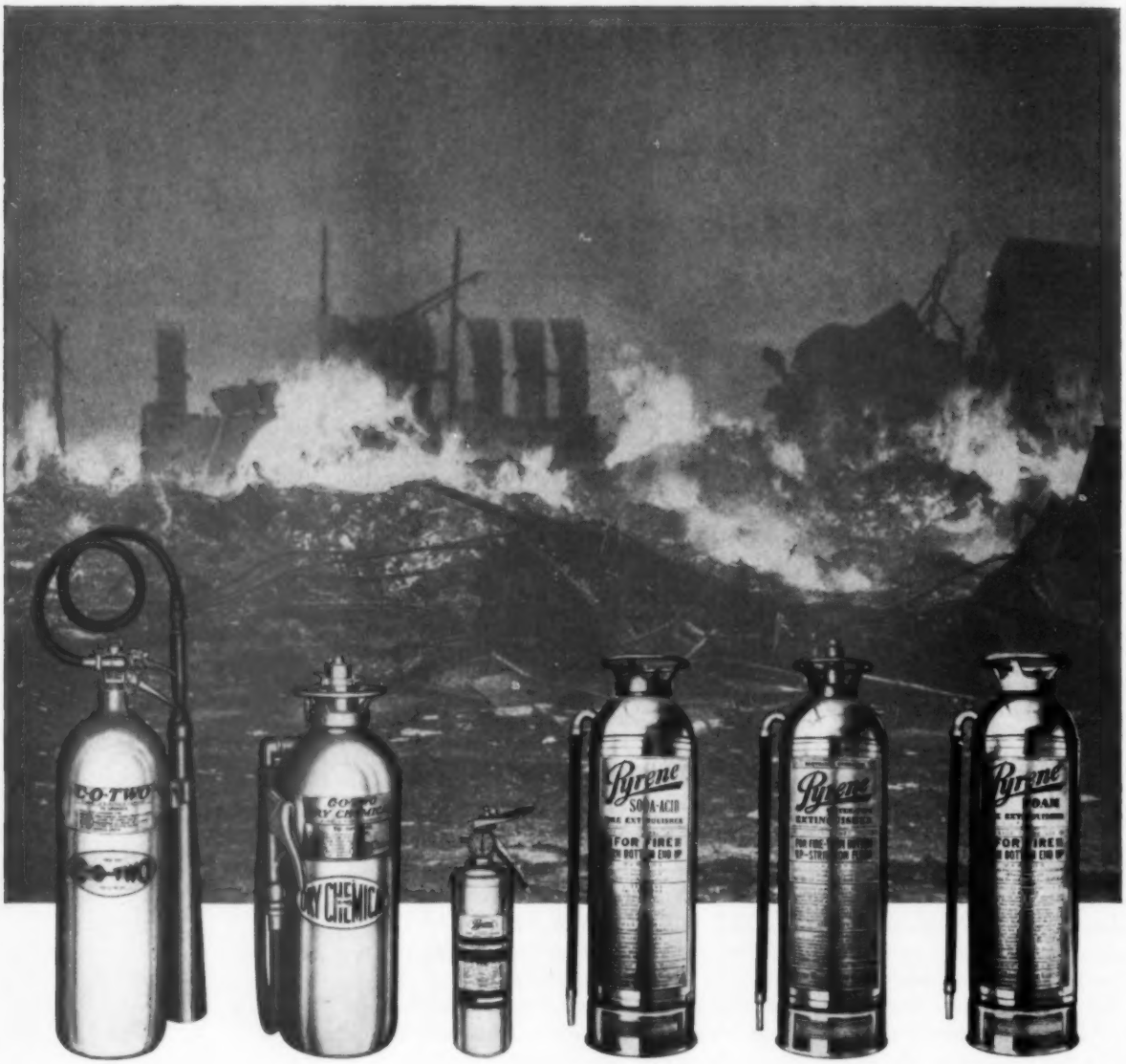
Name_____

Title_____

Street Address_____

City_____

State_____



ALL TYPES...ANY CLASS FIRE!

Since different fire hazards require different types of fire extinguishers, PYRENE—C-O-TWO manufactures all types . . . the finest and most complete line on the market today.

When doing business with PYRENE—C-O-TWO, you receive unbiased advice on what is best for your particular fire hazards, whether class A, B or C. Also, there is a well-rounded sales engineering organization having nation-wide representation to render top quality service wherever you're located.

Don't take unnecessary chances . . . the extensive fire protection experience of PYRENE—C-O-TWO over the years is at your disposal without obligation. Get complete facts now!

PYRENE — C-O-TWO

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

COMPLETE FIRE PROTECTION

portable fire extinguishers . . . built-in fire detecting and fire extinguishing systems

CARBON DIOXIDE • DRY CHEMICAL • VAPORIZING LIQUID • SODA-ACID • WATER • CHEMICAL FOAM • AIR FOAM

MODERN "MINUTE MEN" CHOOSE

Macks

Like their famed forefathers at Concord and Lexington, today's fire-fighting "Minute Men" have to spring into action fast. And, many times, they also have to keep the pressure on for long, wearing battles.

That's why so many departments—big cities, suburban communities, rural districts and industrial brigades—are choosing Macks for their chief weapons against fire.

The word is spreading fast that for quick starts, fast runs, and reliable performance under the severest service, there's nothing that can beat the all-new B Model Macks.

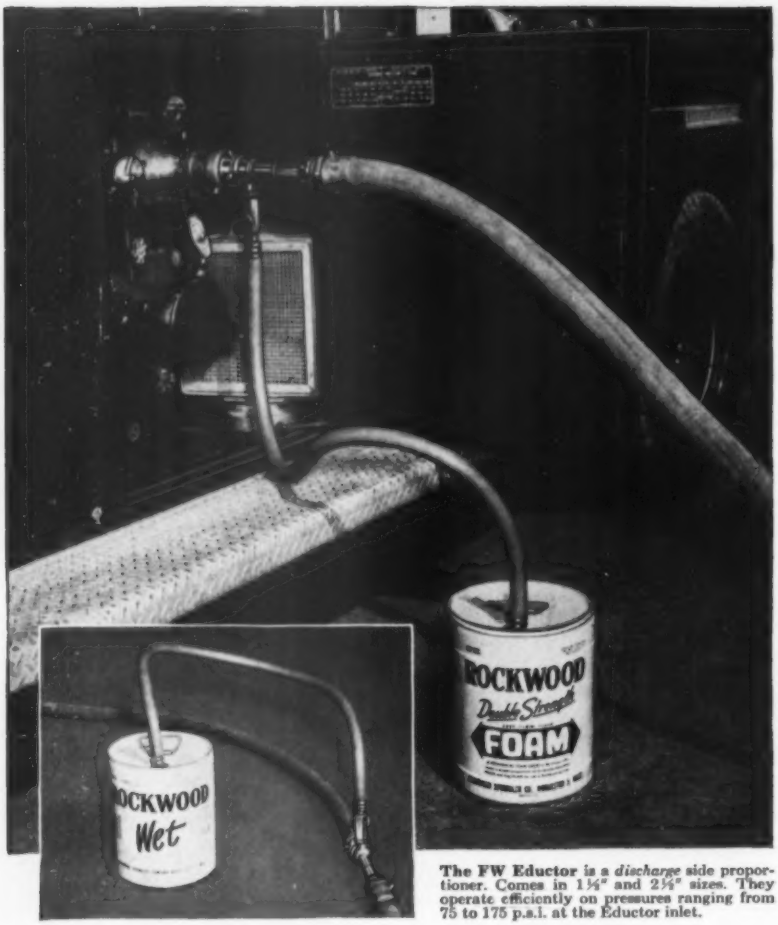
Next time you plan on strengthening *your* front-line equipment, have Mack show you how the most modern apparatus can best meet your needs.

MACK MANUFACTURING CORPORATION

Empire State Bldg., New York 1, N.Y.

3223

TRIPLE COMBINATION PUMPERS—500 TO 1250 GPM . . . SQUAD AND HOSE WAGONS . . . 65', 75' AND 85' AERIALS . . . COMBINATION LADDER TRUCKS



The FW Eductor is a *discharge* side proportioner. Comes in 1½" and 2½" sizes. They operate efficiently on pressures ranging from 75 to 175 p.s.i. at the Eductor inlet.

One for the road!

Protect against flammable liquid fire due to tank truck accidents

With more traffic on congested highways, more filling stations, more and more gasoline tank trucks in daily service, *your* city is in greater danger of a flammable fuel fire than it has ever been before. A sudden crash of a tank truck passing through your city streets tomorrow could confront you with a difficult-to-control flammable liquid fire.

The use of Rockwood FW Eductor reduces the danger of disastrous losses due to such a fast-spreading fire. Developed for operation with Rockwood's FFF nozzle and SG-60 nozzle with FF extension unit, the FW Eductor introduces Rockwood regular FOAM, Double-Strength FOAM or WET (1% or 2%) into the hose line, quickly controlling and extinguishing flammable liquid and other fires.

Rockwood FW Eductor is the simplest form of proportioning you can buy. Ideal for municipal fire departments, oil refineries and industrial plants, it can be attached between discharge gate of a fire truck and hose line, or between hydrant and hose line, or between two lengths of hose.

Be prepared. Put this great fire fighter to work for you. Specify Rockwood FW Eductor when you order a fire truck.

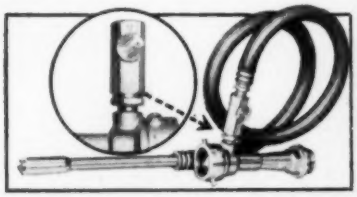
ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

PORTABLE FIRE PROTECTION DIVISION • 1021 Harlow Street, Worcester 5, Mass.

FFF Nozzle comes with Foam screen and solid Foam stream shaper.

Rockwood Eductors are designed for use with both the Rockwood FFF nozzle and the SG-60 nozzle with FF extension unit. SG-60 is an all-purpose nozzle that fights fires 5 ways — high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or of FOAM. FF extension unit discharges Rockwood FOAM in a solid stream or as FogFOAM, and covers large areas at one time.



The Variable FW Metering-Check Valve on the Rockwood Eductor is highly versatile, and is furnished with each FW Eductor. It incorporates both the Metering Valve and Ball Check Valve in one unit, and meters material into the hose line in any proportion from 1% through 6%.

Rockwood Double-Strength Foam Liquid, 3 parts mixed with 97 parts water, forms a solid FOAM blanket that quickly re-seals itself. Available in 5-gallon or 50-gallon drums.

Rockwood WET, 1 part mixed with 99 parts water, increases penetration and extinguishing action of water. Excellent for deep seated fires or where water is scarce. Can be used in proportions of 1% or 2% by volume for Class A and B fires. Available in 5-gallon cans or 50-gallon drums.

When Seconds Count!...

Count on

DUO Safety

FIRE LADDERS

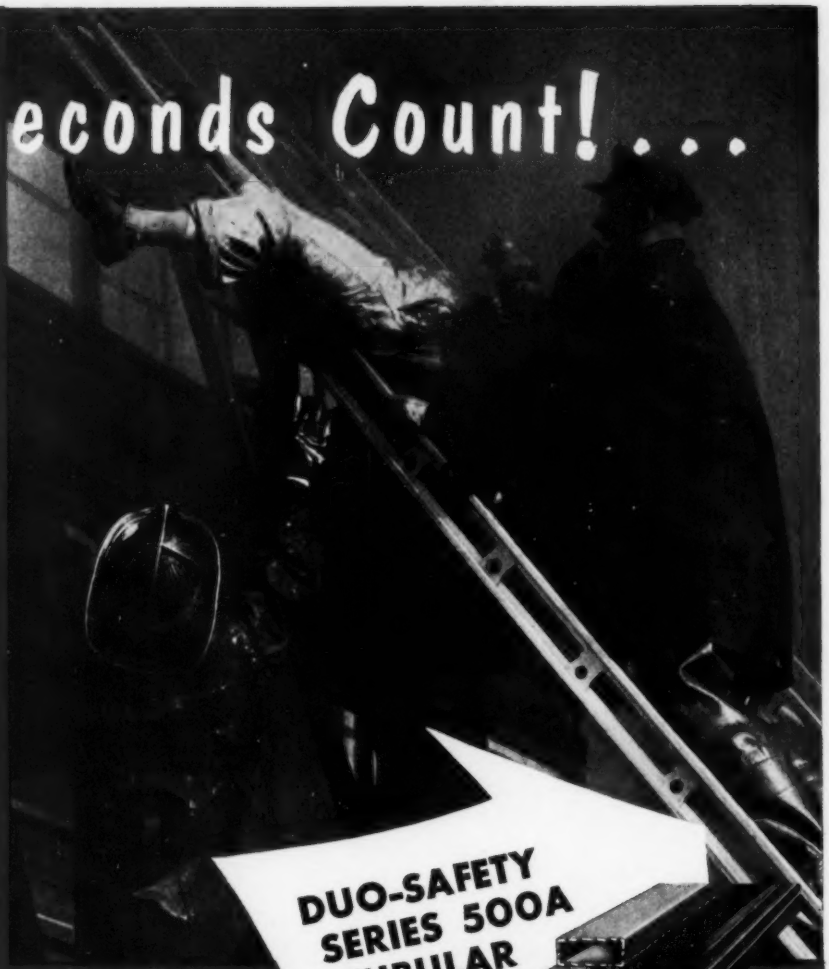


PHOTO BY PHILA. FIRE DEPT.

DUO-SAFETY SERIES 500A TUBULAR RAIL

Here's the proof, in action, of the superior quality, safety and dependability of the famous Duo-Safety line of aluminum fire ladders. The ladder in the above photograph, playing such an important part in the rescue of an unconscious victim, is the Duo-Safety 500 Series Tubular Rail Model. Note how straight and sturdy the rails remain, even under extreme weight. Note, too, that the absence of any projections or sharp, jagged edges provides a smooth rail surface to permit sliding the victim down safely and rapidly. Yes . . . you can count on all ladders in the great Duo-Safety line for the kind of performance that only highest quality delivers. Write today for free, colorful file catalog giving complete information.

DUO-SAFETY LADDER CORP.

809 NINTH STREET, OSHKOSH, WIS.

Plus Power Pumpers

WAUKESHA Model 145-GZB High Output FIRE FIGHTER Engine six cylinders, 5⅜-in. bore x 6-in. stroke, 817 cu. in. displacement, with counterbalanced and vibration dampened 3½-in. 7-bearing hardened crankshaft; dual ignition; precision extra high capacity bearings; overhead valves with Stellite-faced exhaust valves and seats; removable wet sleeve cylinders. Arranged for full electrical equipment and all modern accessories. Send for Bulletin 1662.

WAUKESHA
FIRE FIGHTER
ENGINES

Fire Master Corp.

1000 gpm pumper powered with WAUKESHA 145-GZB

The Fire Master 1000 gpm pumper is built for faster fire fighting—all the way—from the 3-way deluge nozzle on the top of its 7-man cab to the Waukesha plus performance power plant under its hood.

Electric hose reels, on both sides—in compartments in front of rear fenders. Front fender compartments, too—one for batteries, one for equipment tools.

Foam proportioner connected to 1000 gpm pumper. Pumper, wet water system, 500-gal. booster tank. Alternator supplies current for flood lights. And the truck is fully equipped with ladder and hose.

Custom built, of course, by the Fire Master Corporation of Mt. Clemens, Michigan, who picked the preferred power—Waukesha Fire Fighter Engines. For several reasons—from high output to low maintenance. 283

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS. • NEW YORK • TULSA • LOS ANGELES

SQUEEZES PAST OBSTRUCTIONS

E & J RESUSCITATOR - INHALATOR - ASPIRATOR

E&J RESUSCITATOR • ASPIRATOR • INHALATOR
. . . first name in Resuscitators

ACCEPTED
COUNCIL ON PHYSICAL MEDICINE and REHABILITATION
AMERICAN MEDICAL ASSOCIATION

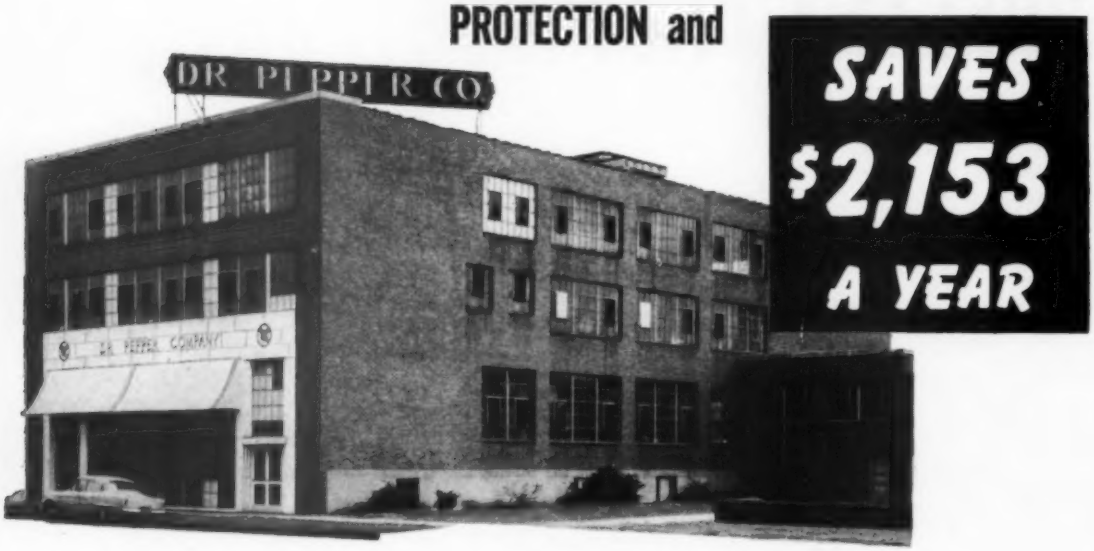
When partial obstructions will not yield to aspiration, or when the air passages are swollen almost shut, the exclusive E & J feature "Precision Flow Control" assumes life-saving importance in emergency rescue treatment.
With it the operator can quickly find just the exact flow of oxygen that will squeeze past obstructions short of complete blockage to provide full inhalation and exhalation *at a slow but life-saving rate!*

FIND OUT MORE ABOUT THIS VITAL E & J FEATURE . . .
Data and demonstration without obligation.
Write to Dept. 544-7 at address below.

E&J

E&J MANUFACTURING COMPANY
100 E. Graham Place, Burbank, California

DR. PEPPER COMPANY branch syrup plant, Birmingham, Ala., protected *Automatically* gets better FIRE and BURGLARY PROTECTION and



"The ADT automatic protection used in our Birmingham Syrup Plant has not only been a great benefit to us from an efficiency standpoint, but each year it has lowered our building protection costs $2153."

E. G. Millican

Vice President in Charge of Production

Preservation of its continuity of production is highly important to the business of Dr. Pepper Company, well-known manufacturer of soft drinks. It was for this reason that company officials turned to ADT for protection of a key facility.

ADT Central Station Burglar Alarm and Aero Automatic Fire Alarm Services are combined to give complete *automatic* protection against fire and burglary. These services—more effective and reliable than other methods—actually cost less, as evidenced by Mr. Millican's statement reproduced above.

Whether your premises are new or old, sprinklered or unsprinklered, the appropriate ADT Fire Alarm Service will detect fire and notify the fire department *automatically*. ADT Burglar Alarm Service will *automatically* summon police when burglars attack. ADT Heating and Industrial Process Supervision will *automatically* detect and report other abnormal conditions.

ADT safeguards, electrically, many billions of dollars' worth of tangible and intangible assets owned by 58,000 subscribers in more than 1,600 municipalities. An ADT specialist will be glad to show you how combinations of automatic services can protect *your* property, profits, and employees' jobs, by minimizing fire and burglary losses.

Call our local sales office if we are listed in your phone book: or write to our Executive Offices.

ADT

Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY

A NATIONWIDE ORGANIZATION

Executive Offices

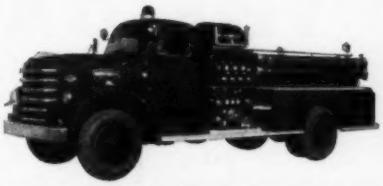
155 Sixth Avenue, New York 13, N. Y.

NEW JOHN BEAN High-Pressure Sno-Foam blankets a fire at 70 feet

Note (above) the heavy adhesive fire smothering blanket of Sno-Foam laid down and (below) the extensive area covered by the firemen applying another John Bean fire fighting first — High-Pressure Sno-Foam.

Now, the original John Bean high-pressure fog fire fighter, with the built-in Sno-Foam system, offers all the advantages of high-pressure fog plus a blizzard of foam that knocks out the hottest fires faster than ever before possible. Your firemen are safe from the heat of raging chemical, paint, gasoline or petroleum fires as a smothering blanket of completely aerated foam can be laid down from distances of 70 feet or more. Sno-Foam can be applied quickly and easily. Aerator adapters slip on the high-pressure fog guns and a turn of a valve delivers Sno-Foam in seconds. Up to 5,000 gallons of foam can be applied from the water and solution carried on a standard truck. A dependable foam metering valve assures correct consistency, using either high or low expansion foam. More than ever before, John Bean apparatus is the fireman's fire fighter.

NOW AVAILABLE



John BEAN (1) HIGH PRESSURE FOG plus (2) VOLUME plus (3) "sno-foam" — all 3 in a single John Bean Fire Fighter.

Write today for complete details on this triple combination of proven fire fighting weapons.

JOHN fmc BEAN

ORIGINAL HIGH-PRESSURE FOG FIRE-FIGHTER

John Bean Division, Dept. 126, Lansing 4, Michigan
John Bean Division, P. O. Box 145, San Jose, California

Can be mounted on most standard truck chassis.

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

NOW THE FIRST "Packaged" FIRE ALARM SYSTEM

PREVIOUS EQUIPMENT REQUIRED THIS MUCH SPACE

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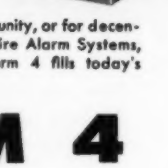


FIRE ENGINEERING

JUNE, 1955 VOL. 108, NO. 6

With the Editor

Another Killer

Fire is one of the nation's most tireless and persistent grim reapers. And down the years its horrible harvests have grown more lush as man has invented new products and processes that provided tools for the "reaping."

One of the latest such developments is the gasoline-powered lawn mower.

On the surface, it is doubtful if any purchaser or user of such a device ever connected it with the hazard of fire. Yet, although in itself, the powered machine is as safe as most other portable gasoline-operated implements, its by-product invites catastrophe. We refer, of course, to the flammable fuel with which it is powered.

Certainly this fact never occurred to the father of a three-year-old boy, in Los Angeles, when he brought his power-mower into his home. Nor did it occur to him that death and destruction lurked in the small can of gasoline which he brought into his basement with his mower. Nor had he any forebodings about letting his little son play around the mower, and the little container of fuel in the basement.

But inquisitive fingers found the can, tipped it, and the pilot of a water heater ignited the fumes. The rest of the story was contained in the obituary notice—and in a letter from Fire Chief John Alderson, of Los Angeles to FIRE ENGINEERING. He wrote: "Nothing upsets me any more than the loss of life of a child, which I think we might possibly have saved. . . . This was a hazard we had not foreseen and it just occurs to me that other fire departments may have the same problem but may not foresee it. . . . We are putting on a drive here now to educate residents with respect to this hazard and are making it a portion of our regular house-to-house inspection program carried out on the company level."

The fire service has always had the problem of hazardous storages of gasoline and other flammable liquids in home and garage. Despite regulations, some of them drastic to control such storages, they have continued; one reason being the difficulty of locating such hazards where they exist, through fire department inspections. And the situation has not been eased any by the flood of gasoline-powered products being brought into the home.

The eager fisherman has his outboard motor (for which gasoline capacities are continually being increased), and he all-too-often keeps a "small supply" on hand, in house, garage or boathouse to be ready for that weekend or vacation trip.

California, the land of eternal sunshine, isn't the only place where this situation is encountered. In the same mail with Chief Alderson's warning comes a report from Ohio's Fire Marshal, Charles R. Scott, on 527 fires in that State last year caused by misuse, careless handling or improper storage of flammable liquids.

And just to make the coincidence the more remarkable, we quote one of the case histories from this report: "A three-year-old boy and his mother were burned seriously when he upset a glass jug of gasoline near a water heater. The fuel was for a power-mower just recently purchased by the boy's father."

What's the answer to this problem? It seems to us there are two pertinent ones: The first is adequate regulatory measures to govern the storage and use of such flammable liquids; storage, if permitted, should be only in safety cans designed for such purpose.

Next is adequate inspections to uncover improper storage and to lead to the proper warning and/or prosecution of violators. And withal, there's a possible third solution: Education! Education of the nation's citizens, householders and parents in particular, on the dangers of bringing flammable volatiles into any occupied structure, in any quantity, for any purpose, anywhere. And the wisdom of not buying any of these gasoline-powered products without weighing their real and potential hazards.

It should not be necessary to point out that there are at this time comprehensive codes and suggested ordinances to govern the storage and handling of flammable liquids. These have been prepared by authoritative committees of the N.F.P.A. (which include representatives of the fire service) and published by that organization and the National Board of Fire Underwriters in various book and pamphlet forms.

Although the introduction of the gasoline-powered devices and appliances we are discussing may be limited chiefly to home use, and the amount of fuel may likewise be limited in quantity, it is *not* limited when it comes to its hazardous propensities. Every effort should be made to locate such storages and to see that they conform to safety commonsense standards.

Fred Shepard

New Shops and Warehouse for Detroit Fire Department

Many Novel Features Included in Newest of Department Repair and Servicing Facilities

By PAXTON MENDELSSOHN
Fire Commissioner and Chairman, Apparatus Div., Detroit, Mich., Fire Department

ON February 17th, in the presence of some 300 City and County Officials and friends, the Detroit, Mich., Fire Department dedicated its new structure housing the Department Repair Shops, and the Stock Rooms and Warehouse Facilities for the Apparatus, Communications, and the Buildings and Supply Divisions. All these services are now under one roof.

The building has been described as one of the largest and most modern of its kind. Except for a 3-bed dormitory on a second floor over the office section (for 24 hour duty emergency repair men), the building is one story, no basement, and will cover 2 entire city squares when a 3-door Fire Station, now under construction as an integral part on the southwest corner, is completed later this year.

The present structure has 90,000 sq. ft. under its roof and cost $1,300,000. The Fire Station addition will add another $250,000 to the cost. Ample parking space is available for shop employees, with a separate parking lot for the men of the fire companies to be located in the adjoining Fire Station. Both lots are fenced in with gates that can be locked at night.

Both structures are of steel, stone, and concrete construction, with red semi-glazed ornamental face brick on white cement.

On the north side, or front of the property, known as "1400 Erskine Street", are located spacious offices for the Chief of Apparatus, Chief of Buildings and Supplies, together with their staffs and store record clerks. Here also is the Reception Lobby, Waiting Room, and other required facilities, over which is the dormitory already mentioned.

All offices have large, clear glass picture windows in steel frames. Heat is generated by automatic oil fired boilers and distributed by overhead space heaters throughout the building. There are two large boilers, operated alternately each week, and a small third boiler is available for use in summer only to furnish hot water. All small rooms and each shop or storeroom section is equipped with separate space control thermostats. The entire piping system is schematic by color; steam, sprinkler, return condensation, water, gas, etc., having its particular code color.

The building has over 7,000 sq. ft. of windows, and upward of 9,000 sq. ft. of skylights, the latter being opened and closed by sectional electric wall controls. All windows along work bench localities are glazed with green, non-glare glass. Artificial light is supplied by various types of the latest design in industrial fixtures to best suit the particular space or requirement.

All work benches are vertically laminated hardwood sections on steel standards, and the shop is equipped throughout with ample outlets for electricity, compressed air, gas, and water. Air compressors and tanks are installed at various convenient locations. The entire structure is completely sprinklered.

The East half is devoted entirely to the Repair Shop, garage space for extra fire apparatus, and the various service shops. This is housed off from the other half by a continuous solid masonry fire wall with only three fire doors, two leading to the General Offices and one to the stores and warehouse section. Here also is a large delivery counter for issuing tools from the tool crib and parts from the stock room. At night, this opening is protected by a heavy roller fire door. All shop doors and vehicle entrances from the main shop to any other section are equipped with automatic heavy duty fire doors.

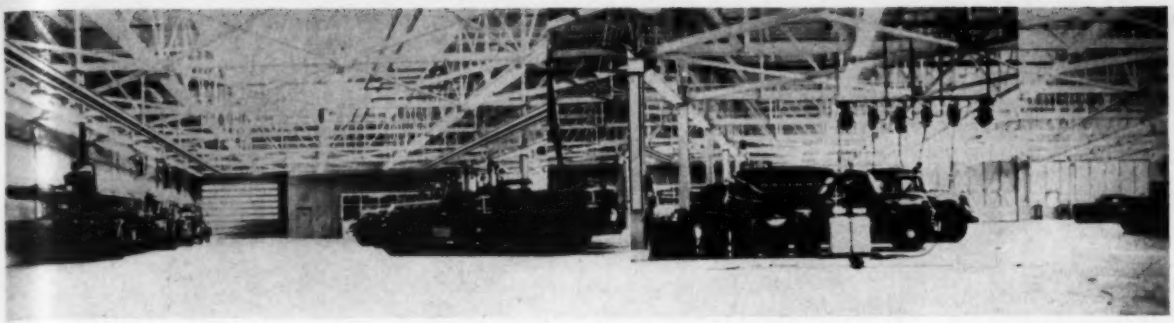
In the center of the north wall of the Repair Shop area are located the offices of the Assistant Superintendent and the General Shop Foreman, each office of ample size with large clear glass picture windows resembling the control tower of an airport, affording a complete view of the shop area.

In the shop area are two hydraulic greasing platforms with overhead pressure grease and oil guns, and an additional battery of pressure grease guns located elsewhere for floor-level greasing operations. There is also a de-greasing tank with overhead crane large enough to handle a complete transmission assembly, motor block, differential or crank case.

A feature worthy of mention is the enclosed, combined pumper test room and spray painting room. It is large enough to accommodate any pumper or ladder truck of the 100-ft. aerial type, with door closed. It is well ventilated, intensely lighted, and has water-screened exhaust fan system. This room is also piped for compressed air to spray paint, and electric outlets for use of portable electric tools. There is within this room

Detroit's new Fire Department Shops and Warehouse.

Fire Department Machine Shop is well equipped and spacious.



Apparatus garage in the Detroit Fire Department Shop Building.

a regular city hydrant connected to the water mains, and underneath is a water reservoir holding about 50,000 gallons. This set-up permits testing pumpers for volume, pressure, and drafting. All water used is returned through a manhole in the floor and excess water beyond the reservoir capacity is drained out through overflow controls.

Throughout the shop area, with switched branches in the paint and woodworking shops, is an overhead monorail crane track with two floor-operated electric hoists of heavy duty capacity. Both the Paint Shop and the Woodworking Shop are large, with floor space sufficient for machine tools and the ability to take at least three pieces of fire apparatus at one time. Both shops have large steel, electrically-operated fire doors, capable of admitting any size piece of fire apparatus.

The Machine Shop, a separated area, is fully equipped with machine tools. There is a separate Sheet Metal and Blacksmith Shop, an Electric Department and battery charging room, a room solely used for maintenance of breathing equipment, and a hose testing and maintenance division. There are two enclosed vaults, one for paint stock and one for acid storage.

Lastly, there is a salvage, or "junk room", completely separated with its own delivery door, where purchasers can load their trucks directly from the outside. The toilet and washroom facilities are large, of most modern design and fixtures, and include showers and dressing rooms with steel lockers.

The power house, with its three boilers, automatic oil burners, tanks, compressors, and color schematic piping could easily remind one of the boiler room of an ocean liner.

Access to the shop section is made by three large steel, electrically-operated overhead doors, so that vehicles can get in or get out at various places in case of congestion. The "main door" is opened by electric eye on the outside and pressure floor plates on the inside, with an electric timer which closes it on a 80 second interval. However, if any vehicle stops under the door, a safety electric eye neutralizes the timer.

The entire building contains a public address system with loud speakers in all sections, and wall-type branch house phones are located conveniently near each loud speaker.

All overhead structural steel is painted a light sand color and wall surfaces throughout are tinted sage green. All concrete shop floors are either treated or painted battleship gray.

One last feature in the shop area is a separate fire-walled, 3-car garage which houses the two emergency fuel trucks and the department wrecker, with separate overhead doors opening directly on the street. Outside, on the front end and set in on its own driveway back of the sidewalk line, is a 2,000-gal. underground gasoline tank with electric fuel pump, with locked controls.

So much for the "shop" section. Without going into lengthy and detailed architectural and engineering specifications, the pictures shown herewith will give a general idea of the whole building.

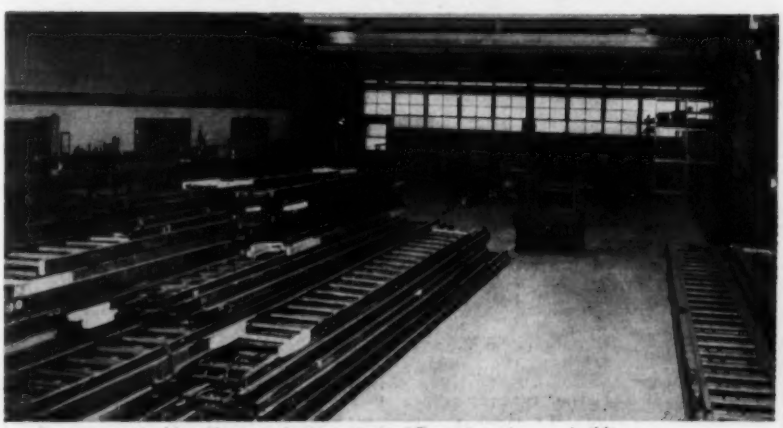
The west half of the building, separated by a solid masonry fire wall, is devoted entirely to the offices, already mentioned, and the various stock rooms and warehouse facilities. An equal amount of floor area is here contained. In this west half are separate bin sections for apparatus parts, communications material, and the materials for building maintenance, and fire station domestic supplies, including furniture storage, etc.

There is a section for machine shop bars, shapes, and steel of all kind; storage space for extra hose, fire extinguishers, alarm boxes, wheels with tires mounted, and all stock bins are of steel and are low enough to be reached from the floor level.

At the south end is a separate, but connected warehouse for communications "heavy" materials, such as reels of lead-covered cable, wire, manholes, alarm box standards, conduit, etc. This space has its own entrance, provided with three large steel overhead doors so that trucks can load or unload inside the warehouse.

(*Continued on page* 569)

Stock room in the Detroit Fire Department Shops



Ladder Shop in the Detroit Fire Department's new building.

Official photos L. A. Co. F. D.

Some stations have flowers while others have snow.

Left: L. A. County Fire Station No. 15 in East Whittier is typical of the smaller, bungalow type stations of the department. Flower bed was planted by firemen at station. Right: Snow is a problem to L. A. County firemen located at high altitudes. Here personnel at Station 79, Big Rock, stand by rig.

L. A. County—America's Fastest Growing Fire Department

Part I

By CLIFF DEKTAR

MANY jokes are made about everything growing big in Southern California, but the area's phenomenal growth is no laughing matter for harried officials responsible for the protection of life and property.

Fire services, of course, are among the most important and therefore, it is certainly no surprise that the Los Angeles County Fire Department has become the fastest growing fire fighting agency in America.

This unique department—the biggest county fire department in the world—has so many different problems occurring so fast that its aggressive young chief engineer, Keith E. Klinger, and his staff, sometimes hardly know where to begin solving them.

Los Angeles County is the second largest fire department in the West, ranking only behind the Los Angeles City Fire Department.

At present, the County protects an estimated 1,300,000 persons living in 2,018 of the county's more than 4,000 square miles. Its protection varies from swank night clubs, movie and television studios, luxurious apartments in West Hollywood to oil fields and refineries in Santa Fe Springs, and from one of the Southland's largest heavy industrial areas, the Central Manufacturing District in East Los Angeles, to the rich agricultural area of the Antelope Valley.

County firemen are stationed on the grounds of three of the area's largest hospitals, including the recently-completed Polio Respiratory Center at Rancho Los Amigos near Downey.

County firemen must be prepared to fight roaring forest fires in 100-degree heat in the summer, or to battle blazes in near zero temperature in the northern part of the county during winter months.

The department is building new stations so quickly that it can't purchase apparatus fast enough to keep up with the construction and, despite the purchase of 15 new triples in the last year, 15 more could easily be used today.

The department protects California's 14th largest city—the newly-incorporated City of Lakewood.

Its Mountain Division maintains 380 miles of motorways, 190 miles of firebreaks and 80 miles of trails.

Among its more unusual functions, the County operates the only forestry nursery in Southern California, and its forest fire patrolmen do double duty as fish game wardens.

During the fire season, five lookout towers on key mountain peaks are manned by departmental observers.

But before any more is written about this unusual department, it would be well to explain some of the basic geography and history which led to its formation.

Population of 5,000,000 and Area of 4000 Square Miles

Los Angeles County, the most populous in California, today has a population of nearly 5,000,000 persons and an area of more than 4000 square miles.

Looking at a map, the City of Los Angeles and some of its suburbs occupy the "heartland" portion. To the south is the Pacific Ocean and Los Angeles-Long Beach Harbor.

The northern half of the country is almost all mountains or desert. The rugged San Gabriel Mountains run from the east county line until their juncture in the western portion of the county with several other ranges.

In addition, several smaller ranges bisect the lower portion of the county. The Santa Monica Mountains, commonly called the Hollywood Hills in their Los Angeles city portion, run from Griffith Park near the City of Glendale west to the Ventura County Line. There are several other ranges including the Baldwin Hills, Verdugos, Puente, Palos Verdes, and San Jose Hills.

These mountains are the key to the beginning of the Los Angeles County Fire Department. On May 8, 1911, the Los Angeles County Board of Forestry was founded. This group limited itself to the forestry problem and protection of the wooded areas and the flood control problem which fire would bring.

The beginning of organized and permanent fire protection to serve the unincorporated territory of Los Angeles County came on July 1, 1921, with the appointment of County Forester Stuart J. Flintham as County Fire Warden.

Chief Flintham immediately enlarged his staff and encouraged the formation of volunteer departments in the various small communities desiring fire protection. Certain legal problems arose hindering the establishment of full-time,

paid protection to these unincorporated areas.

Chief Flintham and his chief assistant, Spence D. Turner, worked with the County Counsel's Office and prepared a bill to authorize the establishment of fire protection districts. The statute passed the legislature and was signed by the Governor on May 23, 1923.

In December, 1923, and the early part of 1924, 33 fire protection districts were formed, which provided the basis of today's department. Fifteen pumpers were soon acquired to serve these districts.

Chief Flintham died on June 10, 1925, and was succeeded by his assistant, Chief Turner.

Chief Turner retired in 1952, to be succeeded by his deputy, Cecil R. Gehr. Chief Gehr began a complete reorganization of the department, which saw the reduction of the 33 districts to 6. His work was cut short by his death, July 14, 1953, when he was killed in a collision in Burbank while responding to a forest alarm in the San Gabriel Mountains.

Deputy Chief Klinger then took over.

Personnel Numbers 1505

Chief Klinger today is in charge of a department numbering 1505 men and women, 85 fire stations, 2 patrol stations, 98 engine companies, 121 pumpers, 24 mountain patrol trucks, 16 rescue companies, 3 truck companies, and a number of auxiliary units.

The growth factor can be seen by corresponding figures for 10 years ago, when personnel numbered 1153; there were 55 fire stations, 5 patrol stations, 64 engine companies, 69 pumpers, and 3 rescues.

The budget rose from $2,998,295.21 in 1945 to $14,314,000.00 for the current year.

Most important of all, population in the unincorporated area rose from 585,000 to 1,300,000.

Today the department is organized into two field divisions and 11 battalions. (Three new battalions were formed April 1 and a new field division is expected to be activated July 1, 1955.)

The department is under the overall control of the Board of Supervisors and the Chief holds the multiple titles of County Forester and Fire Warden, Fish and Game Warden, and Chief Engineer of the County Fire Protection Districts. Chief Klinger is also Region 9 Civilian Defense Fire Chief, which takes in Los Angeles and Orange Counties.

Chief Klinger is assisted by Deputy Chief John Duncan. In charge of the Fire Fighting Services Division is First Asst. Chief Roland W. Percey. Under Chief Percey are Asst. Chief Harvey Crutchfield, Division I, and Asst. Chief Harvey Anderson, Division II.

The Chief has an administrative assistant, Robert Singleton, who also handles the department's public relations and fire information program.

Other divisions include Construction and Research headed by Asst. Chief George Bartling; Special Services, Asst. Chief Des Barton; and the Fire Prevention Bureau, Asst. Chief Les Dutton.

The Forestry Division is headed by Forester Ralph M. Van Wagner and the Business Division shows an unusually fine use of civilian personnel to handle fire department overhead affairs.

A civilian business manager, George Ashe, heads this division, which handles all business affairs from accounting and filing to personnel. Ashe is assisted by a supply officer, Dick Williams, who heads the Supply Section.

Special Services includes Civil Defense, dispatching, mutual aid, training, and fire equipment repair. A battalion chief assists in Special Services, while repair work is under a Senior Fire Equipment Engineer, Chuck Johnson.

Construction and Research oversees all department construction work and drafting and supervises use of 270 boys in juvenile probation camps. These youths help to build firebreaks, trails, and roads, and are available for fire fighting in mountain areas. A civilian camp crew of 30 men is also used for construction work and fires.

The Fire Prevention Bureau is a modern, well-trained organization, but is still understaffed. The Bureau assistant is a battalion chief, while captains head specialized and field divisions. Some 15,000 youngsters are now enrolled in the Junior Fire Department program headed by Capt. Buck Hooper.

(*Continued on page* 537)

Official photo L. A. Co. F. D.

Rothschild Refinery fire in Santa Fe Springs was one of worst L. A. County Fire Department has had in many years. Here Engine 22 is seen in action with monitor going.

Official photo L. A. Co. F. D.

Juvenile forestry camp crews play an important role in helping to fight mountain fires. Here boys get ready to go up hillside behind tractor. Note firemen in white caps who go with camp crews.

Overhaul and Salvage in Theory and Practice

Part IV—Continuation of the Historical Background of Salvage Fire Patrols. London has Oldest Salvage Corps

By ROI B. WOOLLEY
Assistant Editor, FIRE ENGINEERING

Editor's Note: **The first two chapters of this series dealt with the subject of overhaul and its relation to salvage. The third installment introduced the subject of salvage itself, and discussed the origin of salvage and salvage patrols, or corps, with emphasis on the New York Fire Patrol, the first organized unit to practice salvage in this country.**

In the present chapter, the author reverts again to England, where organized fire salvage, and salvage patrols, in spirit if not in name, actually had their birth. The history of this famous corps makes interesting reading and should be included in any comprehensive study of the subject.

The material for this chapter has been taken from several sources, including "Outbreaks of Fire" by S. G. Gamble, Charles Griffen & Co., London; "Manual of Firemanship" Part 6A, H. M. Stationery Office, London, and authorities credited in earlier chapters of this series. Also, numerous article in Fire and Water, Fire Engineer and FIRE ENGINEERING, dating back over a period of three-quarters of a century.

THE London Salvage Corps, which is responsible for fire salvage work in that great city, although actually antedating the municipally owned fire brigade (as was the case in this country), nevertheless had its origin in the transfer of the "fire engine establishment of London from the insurance companies to the old Metropolitan Board of Works in 1866."

It was at that time that the British insurance companies gave up the fire fighting side of their business and concentrated their efforts on salvage work and turned over their fire fighting facilities to the then infant London Fire Brigade, which was formed after the passage of the Fire Brigade Act which gave to the insurance companies the right to form a small body of men under the then Superintendent William Swanton.

London Salvage Corps Headquarters in 1896.

Superintendent Swanton laid the groundwork on which the present London Corps has been evolved. We don't know much about him in this country, but nearly 60 years ago, a correspondent of *"Fire and Water"* (now FIRE ENGINEERING) referred to him in these words. "Mr. William Swanton, who from being practically the corps itself, evolved a thoroughly drilled body of officers and men."

Superintendent Swanton is long since gone, as are most of his successors, including E. Bruce Hall, who succeeded Swanton in 1887, and his successor. Captain James Fox, who came to office in July of 1895, and who headed the corps as the 19th century opened. The present Chief Officer is A. S. Pratten, O.B.E., G.M., M.I. Fire E., A.C.I.I.

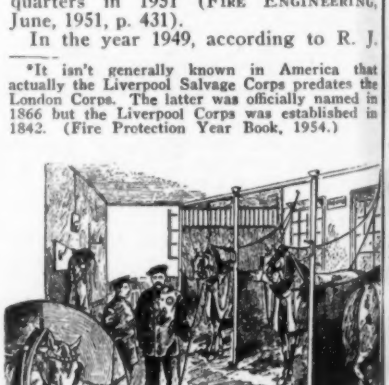
Sixty years ago the headquarters of the corps were "situated in Watling Street" which was also the official residence of the Chief Officer. Watling Street "63/66" continues to be the address of the corps near famed Fleet Street "Newspaper Row," and close by the shadow of St. Paul's Cathedral, which miraculously escaped bomb damage during the London air blitz.

The area covered by the present Corps is Greater London and parts of adjacent counties. There are presently (year 1954), three stations, with whole time personnel of 88, and the Corps operates 9 salvage tenders; 3 portable pumps and 2 staff cars. In 1954 it "attended" 2,382 fires.*

Complete details of operation for the year 1954 are presently lacking, but a good idea of the Corps, and its operations, may be drawn from data given FIRE ENGINEERING's correspondent Paul Ditzel when he visited Corps Headquarters in 1951 (FIRE ENGINEERING, June, 1951, p. 431).

In the year 1949, according to R. J.

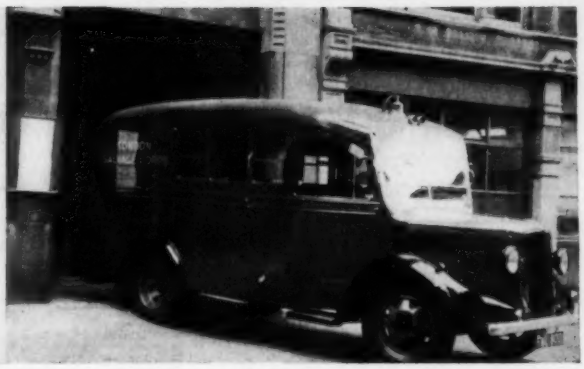
*It isn't generally known in America that actually the Liverpool Salvage Corps predates the London Corps. The latter was officially named in 1866 but the Liverpool Corps was established in 1842. (Fire Protection Year Book, 1954.)



Horse Stalls in the London Salvage Corps in 1896.

London Salvage Corps before the turn of the century.

Officers and crew of the short, stubby "immediate turnout appliance" of the London Salvage Corps. This compact appliance recently placed in service, automatically responds to all alarms within a three-mile radius of the Watling Street Headquarters Station. Note the ladder mounted on its roof.



Photos by Paul C. Ditzel

This London Salvage Corps appliance responds to calls for assistance by the smaller "immediate turnout appliance." This rig is held in reserve for fires which cannot be handled singlehandedly by the smaller rig. This apparatus like all others of the Corps uses only a bell and colored lights for warning traffic.

Morgan, Superintendent of the Salvage Corps, and Station Officer R. V. Seels, speaking in the absence of Chief Officer Pratten, the Corps responded to 2,288 alarms and worked at 659 of them. Equipment of the Corps traveled 40,-117 miles in performing salvage duties. That year the Fire Brigades of London rode to 19,617 actual fires, separate from false alarms, chimney fires and special service calls.

Also, in 1949, the Corps spread 5,115 covers to protect the contents of fire buildings, and cleaned and oiled machines at 1,130 responses and 144 fires. There were 303 occasions where tarpaulins were used for roof repairs. The Corps also reinstated 80 sprinkler systems and fitted 233 new sprinkler heads.

At that time, the Corps had 7 salvage rigs, 2 light vans, one chief officer's car and 3 portable pumps. Chief Pratten's report for that year lists 912 salvage "sheets" on hand. There were then 82 paid officers and men, the men working 24 hours on and 24 hours off. Salaries were, and are, reported comparable for the same kind of work performed in this country.

The Corps, Sixty Years Ago

Before reviewing present methods and procedures of the London Salvage Corps, it might be interesting to hark back to the customs and conditions of the close of the 18th Century. Taking the then Watling Street headquarters for the purposes of our study, we can do no better than quote a London newspaper of the period. This said:**

"The watch-room, where there are men on duty day and night, constitutes the pulse of the Corps. It is the fountain head of all that transpires. Telephones communicate with all the other stations and the Fire Brigade, and each station is similarly in touch with headquarters and with the superintendent of the Fire Brigade of his particular district.

"On the receipt of a message announcing the outbreak of a fire, the superintendent of the district in which the fire takes place makes his own arrangements, while Captain Fox is informed of what has been done, and if one district needs aid from another, it is dispatched by him.

"From the message, the chief officer is able to judge the probable extent of the conflagration, and the magnitude of the interests involved, and help is sent in proportion.

"Waterproof cloths form a large part of a Salvage Corps 'Trap.' . . . If the exigencies of the case demand it, goods are removed bodily from threatened buildings to a place of safety.

"The real work of the corps commences after a fire has been extinguished, and the firemen have departed. If the premises happen to be large and the contents of a perishable nature, there is an immense amount of work to be done where the property is insured.

"Damaged goods are removed to another warehouse, goods undamaged are placed in a position of safety and, precautions are taken against a fresh outbreak, while the men save everything that is worth saving, and what is called 'work out' the ruins, a process which often occupies many days.

"But, whether burning buildings are insured or not—and the knowledge cannot be gained until after the outbreak—the Salvage Corps is always on the spot.

"The fact that both horses and men of all grades are kept busily employed may be imagined when it is known that not more than once a year is a blank report made from the various stations.

"With respect to the personnel of the corps, the members are all reliable men, mostly drawn from the Navy, and of proved courage and physique. Captain Fox speaks in the highest terms of the men, whose ability and activity he is always pleased to encourge. The service is a popular one, beyond doubt, and Jack Tar, when he was grown tired of a 'life in the ocean wave,' finds life as a guardian of insured property ashore very comfortable.

"The horses, like the men, appear to enter very keenly into their work. Between the hours of 6 pm. and 10 o'clock, they stand in their stalls harnessed ready for anything and to go anywhere, the weight of the collars, traces and sway-bars being counterbalanced by a long brass weight something like a deep-sea lead in shape, which by an ingenious automatic arrangement releases the harness in the space of a second, each portion thereof then falling upon the backs of the animals in its proper place.

"The coachmen who drive them are necessarily experienced and skillful men, in whom every confidence is placed. In the case of a horse falling—a vary rare occurrence—a little piece of mechanism at the end of the pole releases the animal from the collar, while the men on the 'Trap' jump down instanter, and in less time than it takes to write it, the fallen horse is on his feet again and in the traces.

"Asphalt pavement will sometimes let the surest horse down; but even this possibility has been provided for by the adoption of a practical form of shoe, which extends only round the fore part of the hoofs, leaving the frog exposed, so that there is no fear of the horses slipping up—or down either, for that matter—and in any case it steadies them to such an extent that they are always able to recover their feet.

"Each station is made as comfortable as space and circumstances will permit. There are dormitories, mess-rooms, libraries—and smoke rooms—papers and periodicals being in the latter. The roll-call is made in each station every night at 9 o'clock, the correct time being sent from headquarters to the other stations, so that the clocks there can be adjusted, if they require it.

"A 'turn out' once every twenty-four hours is also one of the standing regulations. In each station there is what is called a bandage 'shoot.' It is worked on the same principle as an automatic sweet machine the spaces between being filled with rolls of bandages, so that, when one is removed, another takes its place.

"Some sticking plaster, a pair of splints, and a bottle of Friars Balsam complete this useful little machine.

"Whenever a member of the corps meets with an accident, he is well cared for, and in case of death, if he is married, his wife and family are not neglected. The men realize this and the *espirit de corps* among them is very marked."

The author added this footnote: "It may be added that the Metropolitan Fire Brigade and the London Salvage Corps work most harmoniously together."

(*Continued on page* 537)

**It is interesting to compare this report with some of our own present-day customs and facilities. It may come as a surprise to note that the British had "automatic sweet machines" in salvage stations nearly 60 years ago!

Case Histories Attest Growing Values of Ambulance Work

Fire Chiefs Generally Agree on Need and Benefits to Departments Providing Volunteer Service

Editor's Note: **This is the concluding installment of the study based upon the symposium on "Ambulance Service by Volunteers" which began in the May, 1955, issue of** FIRE ENGINEERING.

In this chapter Fire Chiefs detail the benefits they derive from their ambulance service, with emphasis on favorable public relations engendered. Radio is a must, they declare. They also urge care and caution in creating such volunteer ambulance service.

The editors again wish to thank all the many who contributed information to this symposium and to express regret that editorial space limits publication of *all* the data submitted.

Five stretcher cases may be transported in this Verona, N. J., rescue squad unit at one time.

IT is said that New Jersey, which was a leader in the movement to form volunteer first aid and rescue squads, is considered the only state in the country to provide free statewide ambulance and first aid service to all its residents. The state boasts nearly 400 such squads, of which nearly 200 are affiliated with the New Jersey First Aid Council. A large number of these squads are operated by Volunteer Fire Departments.

The Council and its nine districts has a complete mobilization system. Through the state and county organizations it is possible to assemble many ambulance squads within a short time, and simultaneously arrange for other squads to cover the districts whose mobile equipment is in use.

With such a background, together with the fact that the state has suffered a number of large scale disasters involving large loss of life, it is natural that New Jersey's volunteer ambulance forces should chalk up an enviable performance record.

Lack of space prevents detailed recountal of this record but the reports of such disasters as the destruction by fire of the S.S. Morro Castle, which grounded off Asbury Park, N. J., Sept. 8, 1934, in which 42 ambulances and crews were quickly on the scene; the loss of the dirigible Hindenburg in May of 1937, which brought out 51 vehicles, 22 of them out-of-state corps; the Hercules Powder explosion at Kenvil, N. J. in September, 1940, which saw mobilization of 20 ambulances and crews; and the tragic Woodbridge, N. J., train wreck, to which 65 mobile units and crews responded, while the entire state first aid organization was alerted, are sufficient testimony to the importance of the volunteer first aid corps movement.

Pages could be filled with case histories of incidents where these squads performed outstanding service, as well as carrying out their normal, daily routines.

Some light on this routine is continued in data recently released by the International Rescue and First Aid Association on a typical volunteer first aid organization. In 12 years this squad made 2,924 calls involving 3,074 patients. It traveled 102,626 miles, The cases, broken down, included 1,995 medical; 352 motor vehicle accidents; 79 drownings, and 369 other types.

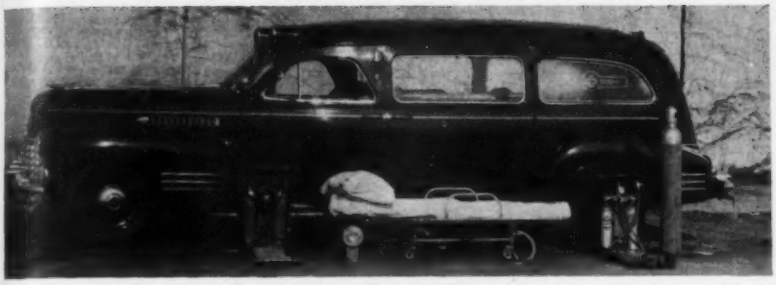
Virginia fire departments stage rescue and first aid contests.

Response to Fires

One question asked those covered by the survey was *"Do You Respond on All Fire Alarms or Only Special Calls?"*

Inasmuch as the majority of those queried were presumed to be a working part of the fire department it was interesting to observe the extent to which the ambulance unit answered fire calls, as well as those concerned with non-fire emergencies.

Slightly over 50 per cent of the respondents reported they respond to all fire alarms, as well as special emergency calls. Less than 10 per cent said they answered all extra alarms, general alarms, etc., as well as special calls. A few qualified their replies by stating they responded to *"some fire alarms"* or *"only to building fires."* A



The 1944 emergency unit of the Smithtown Fire Department, Smithtown Branch, L. I., N. Y., showing part of the major equipment carried. Most progressvie emergency ambulance squads and corps are continually replacing vehicles and equipment. Ability to give patients oxygen en route to the hospital is a valuable asset.

The Reading Hose Company, Reading, Pa., has maintained volunteer ambulance service since 1935. Now in its 68th year, this famous volunteer organization provides free ambulance service to local citizens. Picture was taken during the celebration of the company's 52nd year of service in 1939.

few make it a practice to wait for information on the kind and seriousness of the fire before deciding to respond.

A point made by one unit (Gorham-Fayette Fire Dept., Fayette, Ohio) is interesting. This ambulance squad travels anywhere it is called, and responds to fire calls and emergencies because *"it is (the vehicle) beneficial in having a large enough body so that it may be used as a dressing or clearing station for injured and over-exposed firemen. During extreme weather conditions it provides a mobile shelter from the elements while relief men take over."*

In this case, the "ambulance service" is actually performed by a panel truck type vehicle more in the nature of the fire department rescue vehicle.

Although efforts were made in this survey to reach fire departments operating standard commerical type ambulances rather than larger, heavier rescue-type vehicles, a few of the respondents operate the latter type unit. There has always been some question over the extent to which *"rescue"* units of fire departments, should engage in outright emergency ambulance work (i.e., transportation of persons to hospitals, etc.) as well as outright fire service rescue.

Radio a Universal Need

Short-wave radio is considered a "must" for the emergency ambulance service, nothwithstanding the fact that only 60 per cent of respondents stated they presently operated radios.

Although the majority of these utilized frequencies shared with the police, many operate on the exclusive fire department wave bands, particularly those in the State of New York, which leads all other states in the number of volunteer fire departments having apparatus, fully radio equipped and using exclusive fire department frequencies. In this State a number of fire departments and ambulance units are on County-wide radio frequencies permitting rapid functioning in mutual aid and disaster calls.

In New Jersey and some other States, the ambulance communications are largely handled by police, both at local and county levels. Efforts are being made by many ambulance units either in, or allied with, fire departments, to end this joint operation because in time of serious emergency the communication demands upon police and fire (or other emergency services) occur simultaneously.

Even where fire department emergency ambulance services operate their own short-wave radio, it is possible to monitor the police or other services by installing the necessary receivers.

Builds Good "Public Relations"

One question upon which there was universal, and even vociferous agreement dealt with the extent to which the volunteer emergency ambulance service is practiced by fire departments.

Nothing, in the opinion of the respondents, does more to create good will among the public than the ambulance service, as witness the following quotations from reports:

"Public realizes the good you are doing when you save a life, and they show it when you have a fund drive." —(New Jersey)

"Builds tremendous good will for the fire company, of which we are a subsidiary."—(New Jersey)

"It is not only good public relations for the (fire) company but for the community as a whole."—(Pennsylvania)

"Doctors and the general public alike have confidence in knowing the rescue squad can be depended upon for service."—(California)

"We have two ambulances and crash truck on call 24 hours-a-day so the public can depend upon us in any emergencies.—(Virginia)

"We belive this (the ambulance) is the very best piece of equipment in the fire department."—(New York)

"Ours is the quickest and best service . . . and it is appreciated by all." —(Ohio)

"Letters from the sick and injured tell the story (of good public relations)." —(Several States)

"It (the unit) responds with trained men in emergency cases requiring immediate hospitalization thereby contributing to the saving of lives. Many grateful letters are received from patients and their relatives."—(New York)

"Most definitely the citizens of our community consider the ambulance theirs and have come to know and depend on it. They just know it will come to their aid whenever needed, no matter what the hour."—(New Jersey)

"It (the service) impresses the public with the fact that the fire department is not only concerned with protecting property but life, under all conditions."—(New York)

"The Borough realizes that we are able to save them considerable money in time of need."—(Pennsylvania)

"Operation of an ambulance, we feel, builds good public relations if it is properly equipped and IF the men who man the ambulance are properly trained. Only then can our ambulance build good public relations."—(Oregon)

"People look up to all first aiders, as all of them are firemen who help others. . . . People feel more reliant on firemen and are interested in the work of the fire department."—(New Jersey)

Many of the respondents stressed the fact that the public is impressed by the immediate availability of the ambulance service at all times. A number emphasized the salutory effect the public acceptance and approval their services had upon the firemen themselves.

Other Benefits Derived

Bearing further upon the beneficial results derived from an adequate emergency ambulance service, operated by the fire department, a number of other typical observations are interesting: A New Jersey chief says: *"It means we have our own firemen trained in first aid work and available to help one another at all times and it makes them more safety-conscious in their firemanic duties. It has also led to a better and more organized first aid and safety program in our local grammar schools and high school."*

A New York State volunteer chief says: *"Our ambulance serves as additional interest to occupy our men in the service, making for better morale."*

"It is a great benefit to have trained men (in first aid) and equipment at a fire, to give immediate first aid and life saving service." So writes another New York chief. Still another New York volunteer added this: *"We can't overlook the thought that we, ourselves, may need it (ambulance service) one day."*

Two other viewpoints were stressed: The first, that the service given definitely insures better results in fund raising drives —not only for the ambulance service but in many cases for the entire fire department; secondly, there is great satisfaction among firemen themselves in the knowledge that they are performing an essential service, and benefiting not only their own community, and their family, but also the public generally. As a New Jersey unit wrote: *"We need no more than the feeling that comes with having done our good deed for the day."*

One respondent mentioned *"Special in-*

surance rates (hospitalization)" received by the members of his company.

The chief of a volunteer department in the New Jersey Shore resort area emphasizes another element of the good will building possibilities in this service, in these words: *"We feel that such a service is a grand piece of advertising for the town; visitors, guests and others are assured of safe return to their home towns in case of accident or sickness. Security of this type is very hard to purchase, and is appreciated."*

Types of Emergencies Handled

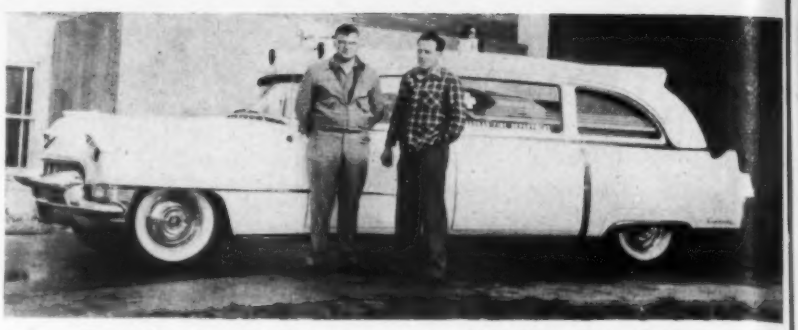
The services rendered by volunteer fire department ambulance corps and squads run the entire gamut of accidents and illnesses, although in the latter case, most organizations do not accept contageous cases, and a number do not handle convalescents. To this broad category must be added emergency maternity cases, and those arising from smoke inhalation.

These emergencies—at least in the instance of accidents, are encountered in the home, on the highways and beach fronts.

Numerous respondents listed *"transportation to and from hospitals"* as an important detail of their service. A few qualified this service by limiting it to *"serious"* or *"dangerous"* cases. Practically all, however, stated that such movement of patients was *by doctors' orders."*

Among the more common emergencies encountered are: cardiac trouble; fractures, with emphasis on broken limbs, back and hips, burns; smoke and gases (respiratory cases) and drowning.

The range of these emergencies is pretty well summed up by the Prineville, Ore., Ambulance Corps., serving Crook County and surrounding area. Its report says: *"It is hard to answer the question on the type of injuries or illness we encounter. We handle nearly every type imaginable in injuries and illnesses."*



The Madras, Ore., Fire Department operates this well-equipped ambulance.

It should be stressed that in no cases do ambulance personnel attempt to go beyond application of first aid in treating emergency or other cases. It is a cardinal principle that all ambulance operations, where at all possible, shall be under or in accordance with doctor's instruction or supervision.

Outstanding Case Histories

An entire book could be filled with the interesting histories of emergency cases, from the bizarre to the tragic, handled by the fire department volunteer ambulance services. Every squad, big or little, has had its critical moment, when life itself hung in the balance.

The following are selected at random from the case histories submitted. The editors wish it were possible to publish all of those which were submitted, and take this opportunity to thank the many who took the trouble to send detailed data, and pictures.

From New Jersey: A three-year-old boy was dying in a local hospital, and needed special treatment which could be provided at the Children's Cancer Center at Boston, Mass. The problem was speed, but with delicate handling. The doctors' first thought was airplane delivery, but this was quickly ruled out because of pressure changes, extra handling and other complications. The train was too slow. The hospital authorities contacted us for assistance in the problem of transportation. We assured them that we were equipped and able to meet the emergency. The boy was picked up at the local hospital and comfortably and safely delivered to Boston Hospital in less than five hours. This case was handled in less time than possible by either air or train at no expense to the patient's parents. The outstanding feature, of course, was the fact that the boy was only handled once. This case attracted much public attention."—DUMONT VOLUNTEER AMBULANCE, INC., DUMONT, N. J.

From New York State: The Inwood Fire Department Ambulance responded to the scene of the crash of the Italian airliner at New York International Airport, on December, 1954, and was immediately put into service by the Port of New York Authority, transporting the victims of the crash. The Authority gratefully acknowledged the services rendered.

From Ohio: A truck-trailer collision gave the Gorham-Fayette Fire Department Emergency (Fayette, Ohio), one of its most difficult operations when it was necessary to extricate the driver from his crushed cab. The combined operation required two heavy jacks, cutting torch (with a fire department rig standing by); two wreckers, and use of forcible entry tools of various sorts. The task required one hour and fifteen minutes, but was successfully handled and the patient lived although the victim's injuries included, besides severe shock, fractured right leg and right hip at the socket; three fractures of the pelvis; possible back and neck fractures; fractured right arm; amputated little finger and multiple lacerations.

From New York: A boy riding his bicycle in Eagle Bay, N. Y., collided with a car and was badly injured. The child's mother and a doctor were called; the latter stated it was a hospital case and he had the Old Forge Ambulance Service summoned. Upon arrival of the ambulance, the boy's mother and grandmother got into the vehicle with the child and within 48 minutes they had arrived at Faxton Hospital, Utica, N. Y., 63 miles away. The hospital authorities stated that had any more time

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Interior of Madras, Ore., Fire Department ambulance.

COSTLY BROOKLYN FIRE FOUGHT BY FORCES FROM THREE BOROUGHS

Loss Estimated at $2 Million; Eleven Alarms Transmitted

A FAST-SPREADING fire that assumed conflagration proportions, even before arrival of the first-due companies, roared through a two-block tinder construction section of Greenpoint, Brooklyn, on the evening of May 12 last, necessitating one of the heaviest concentrations of fire forces seen in New York since the oil plant fire in the same general area in 1919.

The fire started with an explosion of sawdust in a hopper at the Varick Planing Mill, 140 Varick Ave., and before being controlled three hours later, destroyed an estimated $2 million of property in the area bounded by Stagg and Messerole, Varick and Stewart Sts.

The fire jumped Varick St. to the Globe Bolt & Screw Co. plant, then along either side of Scholes St. toward Stewart, leveling a saw works, a protective coating plant and two lumber yards. Sparks flew across Stagg St. and began to invade a third block, but fire fighters nailed this extension before it spread beyond a wood yard in a rigger's establishment.

Only a block west of the fire's limits on Ten Eyck St., are the Preferred Oil Co. and Whale Oil Co. with storages of 1,500,000 gals. of fuel oil, which presented a serious threat to fire fighters. Three blocks away is Newtown Creek, lined with additional hazards.

The entire area is a conglomeration of industrial plants, storages, mills, stores, ancient structures of all kinds, crisscrossed with power and communication lines, and shy on available fire hydrants, all of which contributed to the fire control problem.

According to Fire Chief Peter Loftus, it was necessary to lay hose lines from as far away as half a mile in four directions from the fire to get water.

The long hose-stretches and the limited company crews manning the fire equipment, together with the dangers of having apparatus and men cut off by the advancing flames, posed serious problems for those directing operations. The heavy demands for additional aid, coupled with the fact that firemen were called to fight other fires at the same time, while maintaining protection throughout the vast city, placed a heavy burden on the Communications Bureau of the Department.

A quick review of the way the fire forces from three Boroughs, Brooklyn, Queens and Manhattan, were shifted about to meet the emergency is interesting. Here is a "blow by blow" recording of alarms and responses.*

At 6:09 p.m. two boxes, 197 and 290, were received at Brooklyn Fire Alarm Headquarters. Because these boxes are exactly one mile apart, 190 on the northerly side of Newtown Creek and 290 on the southerly side, Supervising Dispatcher Steve Kostka played safe and struck both.

Lieutenant Mellett of Eng. 237, first to arrive at the fire, radioed a second alarm at 6:16 p.m.

At 6:17 Deputy Chief Stressler, Div. 11, called for a third alarm. This brought Chief Muto, Borough Commander; Assistant Chiefs Conway and Petronelli; Fire Chief Peter Loftus; Fire Marshal Scott and staff and Commissioner Edward Cavanagh, Jr.; also, Ambulance 2 and Field Kitchen 94. At 6:19 a fourth alarm, followed by a special call for Eng. 206 to fill in. At 6:25 p.m., a fifth alarm from Box 290 was struck.

With each of the foregoing alarms, engine and ladder companies were relocated in empty Brooklyn fire stations to cover hazardous areas. The fifth alarm completed the normal automatic, predetermined running card responses. From then on the strategy had to be based upon conditions as they were encountered by the Communications Bureau.

At 6:34, upon Chief Loftus' call for still more help, signal 7-7—290—66—33—760 was sounded, calling for a third alarm response from Manhattan to the Box (760) at 41st St. and East River Dr., close to the 38th St. entrance of the East River Tunnel. This indicated a third alarm Manhattan assignment to proceed to Box 290 at the fire.

At 6:39, signal 99—290—33—9027 was sounded which called for a third alarm assignment of Queens fire forces that would normally respond to Box 9027 (Broadway and Queens Blvd.) to proceed to the Greenpoint fire.

At 7:01, the Fireboat Hewitt, from Fulton St., Brooklyn, and the F/B Mitchel, which was replacing the F/B Willett at 90th St. and Hellgate, were special called. At 7:05, Box 299 was received for a fire in a lumber yard close to the main conflagration.

It should be mentioned at this point that companies responding were in many cases directed by radio where to take position, or shift location on the fire ground. As the fire widened, the problem of command and direction of operations and of maintaining coordination among the vast and far-flung fire-fighting units, intensified. In some companies it was the first time officers and men had been called upon to utilize their mobile radio in such large scale operations.

For the first time the departments Communications Unit No. 1, in charge of Deputy Chief Thomas P. O'Brien, Commanding Officer of the Communications Bureau went into operation. Assisting were Lt. Art Myerson, who handled the engineering details, and Fred Schulze, Acting Supervising Dispatcher, and Supervising Dispatcher Fred Scherb, both off-duty at the time. The conflagration also marked the first widespread use of the department's battery of walkie-talkie units which, officials state, were of great value.

At 7:05 p.m., the new Fireboat McKean was called from her berth to fight her first big fire. At 7:41, Brooklyn and Queens Searchlight Units were called. At 8:18, the Chief of the 48th Batt. was located in Batt. 35 and at 8:40, Eng. 27 was moved from Franklin St., Manhattan, to locate in Eng. 229 Richardson St., Brooklyn. At the same time, Ladder 5 moved from Greenwich Village, Manhattan, to Ladder 108 in Seigel St., Brooklyn. At 12:48 a.m., Rescue 2 (Brooklyn) was called to the fire.

While these forces were engaged in containing the big blaze, Box 872, Ralph and Halsey Sts., Brooklyn, was struck for a fire in a three-story brownstone dwelling. A second alarm was sounded within six minutes. This was a "synthetic" second, to fill in when the Brooklyn Dispatcher learned that the fire was in eight houses from 796 to 812 Halsey. Eng. 218 was called to fill in at this blaze.

At 10:44 a "Dispatcher's third alarm" for Box 872 was sounded to fill the requirements of a second alarm from the fire. Also at 10:44 p.m. Engs. 271, 283

(*Continued on page* 553)

Wall of flames rises from a lumber yard in the Greenpoint section of Brooklyn, as firemen battle to control the huge blaze.

(*) Thanks are due Correspondent Jerry Daly and the Communications Bureau staff.

MIDDLE EASTERN CHIEF STUDIES OIL FIRE FIGHTING TECHNIQUES

Prepares for Task of Protecting One of World's Largest Oil Producing Developments

By Cliff Dektar

A YOUNG fire chief from one of the world's leading oil-producing countries recently completed an intensive six-month training program with the Los Angeles City and County Fire Departments.

Ali Abdul Razzak Saleh, 28, Chief of the Kuwait Fire Brigade and Ambulance Service, also attended classes at the University of Southern California's Fire Administration Training Program.

Kuwait, a British Protectorate, is located at the north end of the Persian Gulf and produces in excess of 1,000,000 barrels of oil a day—more than any other Middle Eastern Country. Also by comparison, the State of California, one of America's leading oil producing states, only produces some 900,000 barrels-plus a day.

"My country is very new in the production of oil," Chief Ali stated.

"Our production has risen from virtually nothing five years ago to the point where it is today. And in our 6,700-square-mile country, all this oil comes from 250 wells."

Chief Ali was training with the London Fire Brigade when he met Chief Henry G. Thomas, Chief of the Hartford, Conn., Fire Department, and Past President of the International Association of Fire Chiefs.

"I met Chief Thomas and he suggested that I come to the United States and receive the benefits of some of America's fire fighting advances. Then he sent me to see Dr. Gerletti (John D. Gerletti, General Manager of the I.A.F.C. and director of the U.S.C. Fire Administration Training Program, on leave) in New York. Dr. Gerletti suggested I come to the Los Angeles area, particularly if I want to learn about oil-type fires.

"Arrangements were made with Los Angeles Fire Chief John H. Alderson and L. A. County Fire Chief Keith E. Klinger for me to receive training with the two departments."

The young chief went through the County's training school at Santa Fe Springs and participated in the fine oil field fire fighting program there. He also visited many County stations.

"One day we go to the mountains to learn about watershed fire fighting," Ali recalled. "Those County firemen up there—they really ran my legs off on those hills," he laughed

"I have been doing many things since I came here Dec. 2," the young chief stated as he set down the heavy briefcase he was lugging. "I enjoyed spending time on L. A. City's fireboats and I also go to several big city fires."

In addition, Ali completed a two-month training course at L. A. City's drill tower. He also attended the Bakersfield Oil Field Training School March 24-26 and received help and assistance in training from the Western Oil and Gas Association.

"We have two large refineries in Kuwait and I am responsible for their protection. It is important that I get as much fine training and information as possible while I am here."

The two refineries in the oil-rich land of a million people are Kuwait Oil Corp. and American Independent. American Independent recently finished a new installation north of the main city of Kuwait.

"I am very much interested in setting up a training program like L. A. City and County have when I get home."

Ali pointed out that he didn't get too much sleep at night—but yet managed to keep running his guides ragged most of the time.

"Particularly I am interested in the fog nozzle use," he said. "I have learned more here in a few months than in the whole year I spent in London.

"Of course," he added, "this oil fire fighting is really what I need to learn more about."

Ali has arranged for the purchase of a new triple combination pumper in Los Angeles and also has bought an ambulance and a chief's car.

He has arranged for L. A. County to test all fire equipment before it is shipped.

Official Photo L. A. Co. F. D.

Chief Ali Saleh brushes up on a little book work with the aid of Captain George Moore (left) of L. A. F. D. Training Bureau and Captain George Figley (right) of L. A. County Fire Prevention Bureau's oil field inspection detail.

Official Photo L. A. Co. F. D.

Captain George Hutchinson (left) records on tape interview with Chief Ali Saleh (second from right). Ali interviews County Fire Chief Keith E. Klinger (second from left) and Assistant Chief Les Dutton (far right), county Fire Prevention Engineer.

Official Photo L. A. Co. F. D.

Chief Ali Saleh (white helmet holding fog applicator) gets experience using fog at L. A. County Fire Department oil field fire fighting training center at Santa Fe Springs. Note burning oil in tank at rear.

Official Photo L. A. Co. F. D.

Battalion Chief T. T. Turley (right), head of L. A. F. D. Training Bureau, briefs Chief Ali Saleh on pumping operations.

"I have been very much interested in rescue work here," Ali pointed out. On his return to Kuwait he plans to train all his men in first aid.

"I have been attending a Red Cross first aid class here and will begin training the men immediately on my return."

Ali forecasts a great future for Kuwait.

"We have a progressive Shiek who believes in taking care of the people. We also have one of the richest oil reservoirs in the world.

"I am very glad to have been able to come to America and particularly to Los Angeles and to have such wonderful cooperation and training help from everyone.

"I only wish I had 48 instead of 24 hours every day."

After leaving Los Angeles, Ali will spend a week in San Francisco, a month in New York, and then plans to go home via London, Paris, and Egypt.

Firemen Meet Obstacles in Four-Alarm Pier Fire

Pier fires of any magnitude can be stubborn, dangerous operations, particularly where fire fighters find it necessary to take apparatus out on the structures beyond the bulkhead. The most stubborn are those fires which involve the underpinning of heavy creosoted timbers.

This is what occurred on April 8, last, at Port Newark, which called forth a four-alarm assignment of Newark fire fighters, who were aided by marine units from New York City, the Coast Guard and private tugboats. Longshoremen and other volunteers also assisted firemen.

The pier, known as Navy Pier 27, juts out 1,500 feet into the North Channel and was rented to Lipsett Steel Products Co. of Brooklyn, by the Port of New York Authority, which leased it from the Navy. Repair of fender piles was being undertaken and three work barges, one of them large, and a scow loaded with lumber, were alongside the structure. The freighter, Cambridge, from Africa, was moored at the east or water end of the pier. Other barges were in the immediate neighborhood when the fire was discovered before 2:00 p.m.

Efforts of longshoremen and others to fight the fire using the hose system on the pier were unavailing and it was not until the water pressure had been boosted at a power station close by that any effective stream could be secured from that source. By that time firemen were on the scene and had begun the task of laying out long hose lines to get at the fire, located about midway of the structure.

The barges as well as a large section of the pier, were all severely damaged by the stubborn fire which was fought from both land and water side. Two small Newark fireboats, aided by other craft, were able to prevent complete involvement of the sea end of the structure, but fire forces had several narrow escapes when flareups nearly trapped them. Four firemen narrowly missed death during a deceptive lull in the struggle. Deputy Chief Francis Hilliard and Fireman James Carr were on a work barge alongside the pier attempting to get an effective stream on the underpinning of the blazing structure, and also to extinguish nre on the barge, when flames, fanned by a stiff wind, flared up on both pier and barge, cutting the two men off with a wall of fire on three sides. Fortunately the Newark Fireboat Michael P. Duffy, under Captain Joseph Harold, was not far away and it pulled alongside and removed the men just before a sheet of flame covered the entire barge.

Two other firemen, Captain Clinton Parmalee and Fireman Eugene Reilly, operating a hose line on a large pile driver, had a brush with death when fire burned through the base and control wires of the unwieldy structure, and its huge superstructure crashed onto the pier. The two men jumped in opposite directions and the pile driver fell between them. Parmalee's helmet was crushed under the steel.

The same flareup engulfed the hose tender of Engine 10, near the barge. Fire exploded its gasoline tank but fortunately all men had scrambled to safety before it became involved. Two other firemen, Edwin Tiplady, Ladder 1, and Victor Lardiere, of Engine 3, were overcome by smoke and treated at the scene.

Over 500 feet of hose was lost.

Use of CD Forces in Natural Disasters

Eighty-five county and city Civil Defense Directors in New York State have recently been apprised of a new law for use of CD forces in natural disasters.

Civil Defense forces in New York State formerly could be utilized only in such emergencies as enemy attacks. Under the new law, the CD forces are now available to local areas in times of —or threat of—hurricanes, floods and other peacetime disasters. Local executives and county sheriffs may, at their discretion, call upon their respective local CD forces as a reserve to give assistance in natural disasters. Such CD assistance would be utilized when existing peacetime forces and personnel, public or private, are insufficient.

In the event that an area's own CD and other forces are inadequate to cope with a natural disaster, the bill provides that the Governor may direct the State CD Director to move additional CD forces into the disaster area.

Newark News Photo

Sudden shift in wind sends fire fighters scrambling to safety at Newark pier fire.

LEASED TELEPHONE SERVICE VS. ADEQUATE BOX ALARM SYSTEM

Which is More Dependable? Which More Economical. A Constructive Analysis

By A. C. Hutson
Consultant, Fire Prevention and Fire Protection

THERE is a present urge on the part of some municipal officials to make use of leased service from the telephone companies for fire service communication. The question is "why?" Is it to give more dependable service? Or provide greater facility of calling the fire department? Or reduce the cost of such service?

There is one factor which must never be forgotten. Life and property are ever endangered by fire. The public demands, and rightly, that the service of protection be continuous; that so far as possible it be not subjected to the anarchy of strikes.

It should be obvious that if a municipality placed communal protection in the hands of a private monopoly, the franchise or contract should include the right of conscription by the municipality.

Service Costs Money

Service is something that must be paid for. Unfortunately few municipalities have provided the funds required for first class upkeep of their fire alarm systems. Whether or not the maintenance promised by the telephone companies will be an improvement is an unknown factor. It must be remembered that the telephone company is a business concern, and a contract with a city is no different than one with a large corporation using extensive telephone, teletype, radio, television and other facilities. Will the city have to hire a number of checkers to assure good normal maintenance? It is well known that concerns, such as those providing protective signaling service to individual plants, have had interruption of service in the wires leased from the telephone company. The recent wire tapping, by employees of the company, indicates a laxity not to be tolerated in a vital service such as fire alarm.

The other important factor is that of fire alarm coverage. It is to the advantage of the telephone companies to have conditions such that the only way a person can transmit a fire call is through the use of the home or business phone. It is unfortunate that few cities, and almost no towns or villages, have provided adequate fire alarm coverage, in spite of frequent failures of the private telephone. The telephone companies have successfully resisted claims in which failure of a person to reach the fire service by telephone has resulted in serious loss. The use of party lines, the insufficiency of tie lines between central offices, an inadequate number of operators, and the early burning out of the telephone facilities are all factors making it of great importance to provide complete coverage of any community through the installation of easily operated signaling devices on the street, where alarms can be transmitted to the fire service with a high degree of reliability.

It is unfortunate that many misleading, or it might even be said, false, statements have been made as applying to the Miami substitution of leased service of telephone facilities for a partial coverage of the city, replacing an outgrown and inadequately maintained old fire alarm system. There have been two claims made in connection to this change. These have been: a lessening of false alarms, and a saving in cost.

The lessening of false alarms has not been proven. It is true that less false alarms, in the past period of a year or less, have been received from street boxes, but many street box locations were changed, probably including some of those from which most of the "maliciously false" were transmitted. The records of every fire department include a number of telephone calls for the fire department which were for small fires extinguished before arrival of the apparatus. Or smoke from a neighbor's chimney may have awakened a person, who called the fire department before investigating the cause. These and others are listed as "no fire," or as "unnecessary alarms." In some communities as high as 20 per cent of telephone alarms are "unnecessary." Obviously if these had been sent in from a street box, and the person had gone back home to see his family, as very often happens, this box alarm would be classed as a false alarm. It is very evident that changing the street box, from one where the pulling of a hook will call the fire companies to one where the lifting of a telephone receiver starts the signal, will not lessen either the unnecessary or the false alarm. The malicious child or the plain drunk will soon know that the simple removal of the telephone hand set will be just as effective as the pulling of the hook on a standard fire alarm box.

Cost of fire alarm service is, as with all safety factors, one of the most important items. Can equal service be obtained at a lessened cost, if leased service is obtained instead of maintaining a municipal fire alarm system?

Analysis of Costs

Let's look at this in a rational way. Irrespective of the method of receiving a call, the fire companies must be notified. The same number of operators are required, whether the alarm is received from a home telephone, from a telephone on the street or from a fire alarm box on the street. There must be supervision of these operators. To date, the telephone companies have not offered to take over the responsibility of providing operators, and it is questionable if they will ever do so.

The comparative cost of leased telephone service and a municipality owned system will involve only two major factors: the cost of installation and the cost of maintenance. This, of course, leaves out the profit item, which must be included in any leased service.

The cost of installation must include not only the first cost, but also the item of life. A study of the various systems in service indicates that so far as the equipment and materials are involved, a useful life of 50 years may be expected, and in fact, except for such things as batteries, there is no reason why there need be replacement because of wear. The major replacement of headquarter's equipment has been because of a desire for a more suitable location. Such installations as the one in Houston, Texas, made about 15 years ago, will be in use for many years to come.

It is therefore essential, in discussing cost, to compare rental of leased service from the telephone company with the installation cost of a municipal fire alarm system, good for a long period. For a complete coverage of New Orleans, it was estimated that for a 15 year period the leased telephone system would cost about three times the total cost of a municipality owned and maintained fire alarm system. At the end of the 15 year period, the municipality-owned system would be good for an indefinite period, and for the leased telephone system there would be the question of renegotiation; and the city would be stuck because if the rental was high, there would be a year or more before the city could build its own system, even if money were available.

There is still the vital question: Should such a vital protective feature as the handling of notifications of fires, and the coordinating of the fire service at time of catastrophe be left in the hand of an organization now handling most, if not all, of the communication facilities of the community; and especially when recent records show that interruption of operations may occur from strike?

New Report on Hazards of Plastics Industry

The National Board of Fire Underwriters, of New York, N. Y., announced, on May 12, the publication of its latest research report on fire hazards in the plastics industry.

The report, a revision of an earlier one published in 1946, provides essential information on the composition and classification of plastics, methods of manufacture and fabrication of finished products.

In addition, the report, which was prepared by NBFU's Committee on Fire Prevention and Engineering Standards, discusses a number of fire and explosion problems associated with the manufacture of basic resins, the production of molding compounds and the fabrication of end-use products. Also included is a hazard survey and safety program along with appended tables on fire properties of the principal hazardous materials, the thermo properties and burning characteristics of various plastics, and a tabulation of identifiable trade names.

In a joint introductory statement John A. Neale, NBFU's chief engineer, and Mathew M. Braidech, research director, point out that there is a special need for information directed toward fire prevention and protection problems that arise from handling flammable liquids, combustible dusts, and highly reactive materials in processing operations, many of which present serious fire and explosion potentials.

Minneapolis Makes Changes in Fire Alarm System

As readers of this Journal know, there has been much discussion throughout the fire service over the question of the substitution of the telephone for the conventional street fire alarm box.

In this connection, rumors of all kinds concerning new policies, new products and proposed changes in present methods of handling fire alarms have been rampant.

One such "grapevine" story was to the effect that the City of Minneapolis, the fire department of which has been much in the public eye, planned to throw out fire alarm boxes and replace them with telephones.

The facts of the case are quite the opposite, as indicated in the data following, provided by Minneapolis' Fire Chief R. C. Malmquist.

The City of Minneapolis is experimenting with a new type of fire alarm box. It is a combination of the conventional "little red box" and an emergency telephone, all within the single box, but operating on separate and completely supervised municipal signal conductors.

With the addition of the city-owned public emergency telephones according to Chief Ray C. Malmquist, the public will have available two methods of contacting the fire department. The first is by means of the regular fire alarm telegraph system such as is found almost universally throughout the United States; the second is the telephone over which a person can talk directly with the fire alarm headquarters, permitting him to give pertinent information to the Fire Department's fire alarm operators.

Chief Malmquist stresses the fact that the telephone communication facility is *in addition to the regular telegraph system* whereby the number of the box is transmitted over the wire to be received at headquarters on a punch-register, while the number is sounded on bells.

Under the system being tried out, not only will the public be able to report fires to the Fire Department but persons will, in addition, be able to report any type of emergency, all without use of a coin, or dialing a number.

The printed instructions on the inside of the box are to *"Pull the Hook; Lift Telephone and Talk to the Operator."* Thus, whether or not the person bothers to pick up the telephone, just as long as he or she *"pulls the hook,"* headquarters will receive the signal, just as it has for years over the old box system. Lifting the receiver, even if the hook is *not* pulled, will transmit a signal to the fire alarm headquarters which will identify the box location and enable dispatchers to direct fire equipment to that location, even if the alarm sender is unable to speak over the telephone intelligently or clearly.

Combined telephone and telegraph alarm box at Minneapolis.

The combination box was designed and installed by the Fire Department's Fire Alarm and Communications Department. At this writing, tests are being conducted on the initial "pilot" model. The Department expects to have 30 to 40 of the new combination units in service within sixty days in order to give the new system a fair trial.

Chief Malmquist is quoted as saying the Department sees "tremendous possibilities" in the use of the telephone addition. The telephone will also be used by Fire Department personnel in the field for private and lengthy messages to the Department, and when the Department's radio communication system may be in use.

A distinct advantage in the system under trial is the fact that the telephone system of Minneapolis is owned and operated by the city, which eliminates one of the outstanding drawbacks of the street telephone system being tried or considered in some other municipalities, namely private ownership by a commercial concern which is subject to labor difficulties, strikes and other troubles.

Telephone equipment is mounted on inside of door of fire alarm box.

Warwick Firemen Lose Fight to Save Electrocuted Victim

Members of the Warwick, Va., Fire Department and volunteers, using an inhalator and two tanks of oxygen, worked unsuccessfully over one of three victims of electric shock for 30 minutes on March 26 last.

The dead man, Charles Milton King of Warwick, had gone to the rescue of two other unfortunates who were electrocuted while drilling a well on King's property. During drilling operations, a pipe held by the two men came in contact with a high tension wire carrying 3,450 volts.

The accident occurred at 2:15 P.M. The men were lifting a 36-foot metal pipe and, when it touched the high tension wire, were killed instantly. Their bodies were badly burned. King, hearing a scream ran into the yard, grabbed a hoe and attempted to free the men, when he in turn was electrocuted. He was wearing rubber boots at the time but apparently came in contact with a charged wire fence near the pipe or else slipped on the wet ground.

Neighbors summoned representatives of the public utility company and the Warwick Fire Department under assistant chief M. C. Edwards. A pumper, and C.D. Rescue unit with two ambulances, three police cars and a truck from 'Vepco' responded.

Commenting on this incident to the editors of FIRE ENGINEERING, Fire Chief C. L. Kegley of Warwick says, "Due to the large number of curious people we were lucky no one else was injured because the fence was heavily charged and the current was fed throughout this fence most of the block. Due to the quick thinking of immediate neighbors, who restrained the wife and child of Mr. King from approaching the victims, they were saved.

Chief Kegley emphasized the importance of keeping well meaning but untrained and inexperienced "rescuers" away from possible involvement in such incidents, lest they also become victims.

Hot TV Shows?

Two fires caused by television sets the same day, May 15th, kept firemen of the Town of Mamaroneck (Weaver Street Station) working.

No serious damage was caused when a set in the big Larchmont Acres Apartments flared up at 8:37 A.M. Blaze was attributed to a short circuit in the wiring, firemen reported.

Volunteers used carbon dioxide, not long after, to extinguish a fire in a set in a home on Glenn Road. The instrument was badly damaged.

Operations were in charge of Fire Chief Dominick Ianello.

San Francisco Ferry Building at height of fire.

San Francisco Firemen Save Historic Ferry Building

A four-alarm fire, believed caused by sparks from an acetylene torch, caused damage of between $750,000 and $1 million to San Francisco's famed Ferry Building, on April 1, and brought death to one person and injuries to two others in a freak accident. Eight fire fighters suffered hurts, none of them serious.

The fire, its billowing smoke clearly visible from miles around, came at the peak of the homeward bound commuter rush. The first alarm was sounded at 5:17 P.M. Additional alarms were transmitted at 5:20, 5:24 and 5:35 P.M. bringing out some 300 fire fighters and over 40 fire units, including fireboats, Navy, Coast Guard, Army and other craft to the scene.

The wing of the north end which burned, was relatively a shell, having been cleared out for reconstruction into the projected new World Trade Center. A cutting torch was being used on the second floor of the remodelling job, and it is believed sparks left by this operation ignited the structure.

Soon after workmen had quit for the day, a janitor saw flames starting to go up the side of a beam on the second floor. He called an electrician and they both in turn summoned firemen.

Fire Chief Frank P. Kelley believed the fire flashed out of the flooring after being hidden temporarily. It had a good start, but fire fighters, massing a heavy complement of equipment on the land side, were able to stop the southward spread of the flames from involving that part of the Ferry containing the world's famous big tower which weathered the quake and fire of 1906. On the seaward side, the City-State fireboat Phoenix (which not long ago replaced the city's two old fireboats) was augmented by five other craft; the Coast Guard cutter Calumet, which moored directly alongside burning slip 3 with a 110-foot Coast Guard tug, to pump sea water onto the burning dolphin that separated piers 3 and 5. Land firemen snaked hose through the big Ferry Building and directed heavy streams onto the fire from every available vantage point.

Meanwhile, some 40 police struggled to control the crowds and untangle what promised to be one of the city's worst traffic jams in years.

The fire, which originated in the carpenter shop on the finger pier or dolphin, spread rapidly through the creosote-soaked wood. Flames at times shot 100 feet into the air above the roof of the pier sheds. Flames finally reached the end of the finger pier or "dolphin," separating the Ferry Building's slips 3 and 4, and sent a Ferry building landmark—the old, ornate bell tower housing a fog horn, tumbling into the Bay.

The fire was reported under control by 6:00 P.M. but fire forces remained on guard throughout the night. During the progress of the fire, three small blazes, started by wind-borne sparks, were nipped by vigilant firemen. At 8:30 P.M. there were still 27 pieces of apparatus operating at the building.

The Ferry Building was opened in 1898 and until the advent of the Bay bridges was one of the busiest transportation hubs in the world. A small army of commuters still uses the Ferry, and transcontinental train passengers enter the city through its portals.

The north wing, which suffered most of the damage, is the center of a $5,600,000 World Trade Center being set up in the building. A $2 million remodelling job was under way at the time of the fire. The building is 661 feet long, 150 feet wide and three stories high, except for the tower, which rises 235 feet. The structure, built on piles and 111 huge concrete piers, has gradually settled through the years, but still stands steadfast today, having weathered earthquake and conflagration.

The freak accident, which brought death to a 52-year-old paint company employe and injuries to a man and woman, occurred when a Municipal gas-propelled bus tangled with a loose hose line and sent it flying into the two men and woman on a safety island. The victim, who died two hours later in a hospital, was believed struck by a coupling on a length of uncharged hose, which flailed through the air about five feet above the ground, when it became tangled with a bus's wheel. The victim who died received severe head injuries. The other two injured were able to go home after treatment.

Ferry Building tower topples during fire at San Francisco, Cal.

Live-Wire Volunteer Department Reports

The Manhasset-Lakeville Fire Department, on Long Island, N. Y., elected officers for 1955-56 on April 7. Chosen were Chief James Platz, 1st Deputy Chief Donald Gray, 2nd Deputy John Paradise, 3rd Deputy Joseph Mastro, 4th Deputy Robert Terry. Also President Harry Carroll, Vice President Frank Paradise, Secretary Louis Kunkel, Treasurer John Kromm, Sergeant-at-Arms Ronaele Darress, Surgeon Dr. Nicholas Abbadess, and Chaplain J. Frank Erickson.

Department protects some 18 square miles just outside of New York City on the north shore of Long Island with 235 members—entirely volunteer—and 17 pieces of apparatus. Equipment includes two 1,000-gal. pumpers, four 750-gal. pumpers, a combination floodlight and 750 psi fog unit, 3 hose trucks, an 85-foot aerial ladder, two city service ladder trucks, a floodlight and rescue truck, and a smoke ejector unit, plus an ambulance and a chief's car.

The department maintains its own basic-training schools, one for probationary members and another for drivers and pump operators, and a fire prevention bureau, each of these divisions being directed by a deputy chief. A total of 38 rookies received training in 1954, while the fire prevention bureau made 662 inspections of mercantile establishments and places of public assembly. Advanced firemanic training is given by the Firemen's School of Instruction of the Nassau County Vocational Education and Extension Board.

Estimated fire losses in the Manhasset-Lakeville district dropped from $45,205 in 1953 to $40,725 in '54, though the area's total assessed valuation increased from $102 millions to more than $105 millions during that period.

Double Shut-Off!

Easy to Turn Under Pressure!

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FOG NOZZLE

PERFORMANCE DATA							
		60° Fog		30° Fog		Straight Stream	
STYLE	P.S.I.	G.P.M.	Reach	G.P.M.	Reach	G.P.M.	Reach
1201 1"	125	32	13 ft.	28	23 ft.	24	75 ft.
1212 1½"	100	110	18 ft.	90	30 ft.	75	100 ft.
1221 2½"	90	175	28 ft.	170	40 ft.	143	130 ft.

FEATURES

- **DOUBLE SHUT-OFF** Opens from shut-off directly into fog or straight stream. Reduce water damage by opening nozzle directly to fog.
- **EASE OF OPERATION** All degrees of fog, straight stream, or shut-off are instantly available. Akr-O-Jet Design makes adjustment easy at all pressures.
- **SOLID FOG CONE** Teeth chew water into solid fog cone.
- **DURABLE** Tough, rugged construction provides years of trouble-free service.
- **POSITIVE GRIP** Rib-grip for sure-grip.
- **SMALL STREAM** For washdown.

3/4" — 1", 1-1/2" and 2-1/2" sizes

AKRON BRASS

FIRE FIGHTING EQUIPMENT

AKRON BRASS MFG. COMPANY, INC.

Wooster, Ohio

Smoke Retards Attack, Adds to Loss

What might be termed a "typical basement fire" in a small city presented complications for Walla Walla, Wash., fire fighters on the afternoon of April 5, last. The fire itself was not extensive and once located was easily extinguished. It was the problem of locating it and hitting it before it could communicate to adjoining occupancies that punished fire fighters during their three hour struggle.

The stubborn, smoky blaze originated in the basement of the Fuller Service Co., dealers in paint, wallpaper etc., one of four establishments in a single building located on the north side of Main st. near First ave., Walla Walla. The cause was not determined, but employes had been in the basement about 20 minutes before the fire was discovered, at which time there were no indications of any trouble. One of the staff members, returning later to the basement, found fire burning in the joists. He grabbed an extinguisher and called for help, and the fire department.

Firemen arrived quickly, but by then smoke was so heavy the employes had been driven out, and the fire fighters were unable to enter the basement to get at the fire.

A further complication in their attack was the location of the old structure, one side being on Mill Creek, practically cutting off all efforts to get at the blaze from either side of the building. Firemen attempted to overcome this, however by setting ladders in the water and against the walls of the building, to reach the few openings that might be vented. The aerial ladder was placed against the roof and top ventilation attempted. But still the smoke persisted, seeping into adjoining stores containing a candy, optical and sewing machine establishments.

Firemen donned masks but had difficulty operating in the basement because of heat and lack of oxygen. They were able, however, to prevent extension of the blaze into the first floor, but water and smoke caused heavy loss in the wallpaper and other stock.

Exploding paint cans, which let go from the heat in the basement, further handicapped fire fighters, several of whom suffered injuries during the fray. Chief Leonard Adams was given first aid for a cut on the hand and Fireman Victor Johnson of Station 3 was also treated for a cut artery.

The department used the men and equipment from all three fire stations, five pieces of apparatus in all, holding one unit in reserve at Station 1. The Air Base Fire Department, and District No. 4 offered assistance if needed.

Heaviest losers in the fire were the W. P. Fuller Service Co., Russell Candy Co. next door, Magary Optical Co., and Singer Sewing Machine Co., the latter two receiving only smoke damage.

No estimate of damage was given.

Photo by Sheridan Dickson, W.W.F.D.

Blank side walls delay fire control operations at Walla Walla fire.

Photo by Sheridan Dickson, W.W.F.D.

Absence of wall openings aggravates smoke condition at Walla Walla fire.

New Mexico Gets a State Fire Marshal

A bill was recently passed by the New Mexico State Legislature, and signed by the Governor, establishing the position of State Fire Marshal.

Some of the provisions of the bill follow:

The position of State Fire Marshal is hereby created. The Superintendent of Insurance shall be the state fire marshal.

The marshal shall have the power to appoint a deputy, state fire marshal and a clerk stenographer to assist in the execution of the marshal's duties. Any deputy state fire marshal appointed by the state fire marshal shall be a person experienced in the field of fire prevention and fire fighting and such person shall have completed a course of training in actual attendance at a fire training school.

The marshal shall make available from funds hereinafter appropriated an amount not less than $2,000 dollars each year to be used for the purpose of conducting a fire fighting school, which school shall be open to all firemen of the state, and which shall be for the purpose of demonstrating and teaching methods of preventing and extinguishing fires. The marshal shall be responsible for establishing and conducting such a school each year.

The marshal shall prescribe reasonable rules and regulations and programs for the teaching to all school children in the state, whether in public or private schools, the proper methods of fire prevention and control.

The marshal is hereby authorized to make investigations or require his deputy to make investigations and reports of existing conditions in the state which are fire hazards, and to make reasonable orders for the alleviation of such situations, as he may deem necessary. In the event the orders of the marshal are not carried out by persons to whom they are directed, he shall institute proper proceedings under municipal ordinances of state laws to require compliance to his orders, as he may deem necessary.

The marshal or his deputies, agents or employees are authorized to make investigations deemed necessary of any fires in the state and to require reports from his deputies concerning all fires in their districts. For the purpose of such investigations, the marshal and his deputies are authorized to conduct hearings, subpoena witnesses, and take testimony regarding said fires. For the purpose of the evaluation of evidence, the state fire marshal shall have access to the facilities and personnel of the state police laboratory, and the executive head of such laboratory is hereby directed to cooperate fully with the marshal.

The marshal shall furnish to the proper law enforcement officers any evidence he may discover in his investigations which indicates criminal acts.

False Alarm Takes Tragic Toll

Baltimore, Md., which has had its share of fire apparatus accidents resulting from false alarms, chalked up another tragic story on April 7, 1955.

Nine-year-old La Ramona Willinghans was struck and critically injured by a piece of fire apparatus as she played in the street. Her left arm was torn off at the elbow.

The apparatus was answering a call that proved to be false.

AN
AMERICAN LaFRANCE ANNOUNCEMENT
TO THE FIRE SERVICE

That we may continue to serve the needs of your fire department in the future even better than in the past, we have effected a corporate merger with Sterling Precision Instrument Corporation.

This change will make additional resources available for future growth and technical development of our products and their use. It also makes possible a continuance of our policy of growth with the fire service.

Our new title is AMERICAN LaFRANCE CORPORATION. But it is still AMERICAN LaFRANCE in name, policy, service, product and personnel.

For more than half a century AMERICAN LaFRANCE has been accepted as the standard of quality and performance in fire fighting equipment. We sincerely appreciate this confidence you have shown in our products. We will work to merit a continuance of your respect for, and patronage of AMERICAN LaFRANCE.

GEORGE R. HANKS, President
AMERICAN LaFRANCE CORPORATION

A roof collapses in one of nine buildings destroyed by fire at the Schwartz Paper Company warehouse in Muncie. Loose bricks in the foreground are from a wall which collapsed earlier, killing three firemen as they pulled hose into position to fight the blaze.

Three Muncie Firemen Killed by Falling Wall

The collapse of a brick wall brought death to three firemen and injuries to a fourth during a $250,000 paper company fire in Muncie, Ind., on Feb. 9, 1955.

Muncie Fire Chief Richard DeCraspos and Delaware County Coroner Eugene Eissman advanced the theory that either an explosion of insecticide bombs, or expanding gas from burning paper, was responsible for the sudden tumbling of the wall, which measured 20 feet in length and 30 feet height, and which trapped the victims as they were attempting to pull back hose lines.

The dead firemen are Capt. Clarence White, 50, and fire fighters Vernon Lutton, 30, and Doyle Upchurch, 34. The injured man was fire fighter Eugene Sanders who suffered a compound fracture of the left leg when he was pinned under the bricks and stone with the other three firemen. A fifth man, Lieut. Asron Belcher, 45, was nearly trapped by the falling wall but escaped with minor bruises and cuts.

Firemen White and Lutton were killed instantly; Upchurch died en route to the hospital.

The first alarm for the fire, which was in the 60-year-old Schwartz Paper Company, was received at 9:30 A.M., and a second alarm was sounded four minutes later. The blaze was fought by the entire Muncie Fire Department, which managed to save two of the ten inter-connecting brick and stone buildings which composed the plant. Part of the heavy loss was suffered by the Warner Gear Division of the Borg-Warner Corporation, and a Muncie furniture factory, which had goods stored in parts of the buildings.

A tragic phase of the incident was the fact that one of the ambulances sent to pick up the dead firemen was driven by the brother of one victim, Policeman Ray Lutton.

New Fireboat Also Serves as Convoy to Tankers

The City of Cleveland, Ohio, recently launched a new 58-foot pumper, the "Clevelander."

The craft was designed and built by Paasch Marine Service of Erie, Pa., and has a total pumping capacity of 6000 gallons per minute. Four General Motors "6-71" marine Diesels provide power both for pumping and propulsion.

The Diesels each drive a Fairbanks-Morse centrifugal pump which delivers water directly to one of four monitors at the rate of 1500 gallons per minute at 140 pounds pressure. Flooded suction lines eliminate necessity for priming.

Propulsion power is provided by two of the Diesels which also operate pumps by means of front power take-offs. The craft has a cruising speed of 12 miles per hour and a top speed of 14 miles. The Great Lakes Diesel Company of Cleveland engineered the craft's pumping and propulsion facilities and supplied both the engines and the pumps.

The boat, the second in the city's fire fighting service, is 58.4 feet in length, has a beam of 13 feet, a 6.4-foot draft and is of steel construction. She has remote engine controls, radio, a 32-volt lighting system, automatic hot water heating and is equipped to pump into shore lines when needed.

Although the primary purpose of the craft was to supplement fire fighting facilities along Cleveland's extensive water front, she is also used in fire prevention work. One of her daily tasks is to convoy tankers loaded with hazardous products such as oils and gasolines through the winding maze of the Cuyahoga River.

Fireboat "Clevelander," with all four monitors in operation, delivering 6,000 gpm at 140 psi

Volunteers Train Year-Round On Masks

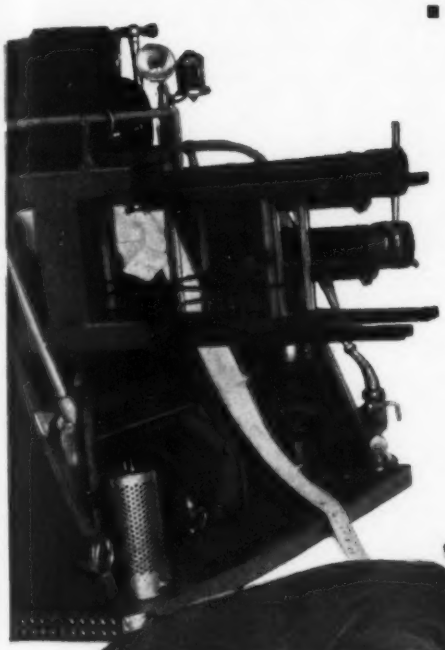
The Columbus, Neb., Volunteer Fire Department believes in year-round training in the use of masks, according to Lowell B. Grimes, Chief Instructor.

He maintains that every town should have a group of men trained as a "mask crew" in its fire department, to cope with modern fire attack strategy, and the dangerous fumes and gases which are by-products of this chemical era.

He contends that more firemen are killed by smoke than by flames and that broader, better use of masks would help prevent this. "When a fireman is overcome by smoke in a building or working off an aerial ladder," he says, "it requires two men to get him out of the building or off the ladder." This he believes is inefficient. So it is that in his department men are given five hours gas mask training every month, or a total of 1,200 man-hours per year.

"It takes practice" (to properly use masks), maintains Grimes. —"Not practice once in awhile, but every week, every month, so that every man in the crew can protect himself and his brother firemen next to him and so that he can learn to perform strenuous work while wearing a mask. It takes practice to have all signals worked out perfectly so that every man understands his job and knows how to do it."

Up to 10 lbs. lighter per 50-ft. length ...with DACRON filler cords.



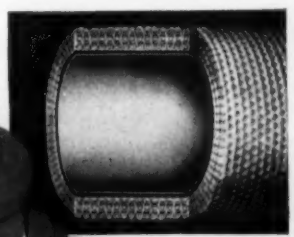
--EUREKA Multiple-Woven

Hosemen appreciate the *lighter weight*, *greater strength* and *safety* of Eureka Multiple-Woven Hose when made with circular (filler) cords of Dacron*. They like, too, the ease with which it rolls into coils or bends back on itself . . . the speed with which it dries.

Those entrusted with the buying of fire equipment also favor Eureka Multiple-Woven. Experience has proved it least expensive in the long run, despite its premium quality and initial cost. Users report up to 25 years' useful service life from this unique hose that is woven on special, never-duplicated Eureka looms.

On every count—quality, economy, safety and performance—*your* choice of hose is beyond criticism when you make it Eureka Multiple-Woven! You'll also have the added satisfaction of buying your hose from a fire hose specialist.

*Du Pont's trade-mark for its polyester fiber.



All plies are woven *and interwoven* simultaneously. There's no space between plies for water and dirt.

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

195 Hudson Street • New York 13, New York

Division of United States Rubber Company

The new fire headquarters at Menlo Park, Calif., symbolizes the progressive administration of retiring Chief Cuff.

Chief Thos. J. Cuff Retires

Fire Chief Thomas J. Cuff retired May 1, 1955, after 23 years of service as head of the Menlo Park, Calif., Fire Department, climaxing a career as fire fighter that began in 1913 with the Regina, Sask., Fire Department.

Chief Cuff, a native of Watertown, N. Y., saw fire fighting service not alone in Saskatchewan, but also in the Detroit Fire Department and in the U. S. Government at Panama Canal and at the Presidio in San Francisco.

At the time of his appointment to Menlo Park, he had been on the Berkeley, Calif., Fire Department for 11 years. In 1938 he was sent to Pocatello, Ida., at the recommendation of the National Board of Fire Underwriters to organize that department. In 1941 he was sent to Billings, Mont., on a similar assignment.

In 1932, then a Lieutenant in the Berkeley Fire Department, he was named Chief of the Menlo Park organization which, at that time, numbered three paid men (including the chief) and 25 volunteers. Equipment consisted of two engine companies, a squad truck and two fire stations.

Today, Menlo Park numbers over 70,000 people in the fire district of some 30 square miles area and the Fire Department has six stations, including a new $150,000 headquarters; there are three chiefs, 60 full paid men, and six engine, four squad and one ladder companies.

Chief Cuff has always been active in fire service and civic affairs. He is a member of the Pacific Coast-Inter Mountain Association of Fire Chiefs, the International Association of Fire Chiefs and numerous other organizations. He has also been a director of the Menlo Park Chamber of Commerce and the local Lion's Club.

Thirty-Nine Die in Theatre Fire Panic

Thirty-nine persons, most of them children, died on Sunday April 3rd, last, in a fire that destroyed the Cine Rio motion picture theatre at Sclessin, near Liege, Belgium.

The flash fire broke out behind the screen and spread rapidly, blocking the emergency exit located under the screen to the 130 persons in the 212-seat movie.

Fed by pressed-cardboard furnishings on the walls, the fire spread so quickly that victims could not reach the other exit, a 6-foot-wide passage. The movie house, which was showing a children's film, "Adventure of Seville," was destroyed in 15 minutes.

The theatre, a narrow building in the middle of a Belgian and Italian steel workers' district, had only the two exits and these were reported impassible within a couple of minutes.

The fire started at 6:00 P.M., believed caused by an explosion of a kerosene oil reservoir system. According to eyewitnesses, the screen suddenly burst into flame. Someone shouted "Fire!". A general panic followed. Those in the front rows tried to climb over the backs of seats behind them. They fell and stumbled over one another, blocking the rows of seats and preventing escape.

Thirty-four of the victims were between 2 and 13 years old. Of the five others killed, all women, two were 70. Of the 100 injured, many were hospitalized, several with critical burns.

Firemen from Liege reached the scene in half an hour after the flareup and found the bodies in the wreckage. The victims were so badly charred authorities were not certain just how many died. Identification was impossible. Thirty-nine bodies were buried April 7 in a mass state funeral. King Baudouin of Belgium visited the wreckage.

Entrance of Cine Rio Movie at Sclessin, Belgium, burns after kerosene explosion on April 3. At least 39 lives were lost, the majority being children.

Oxygen Tent Starts Fire

A patient at New Haven Hospital, New Haven, Conn., received burns about the hands on March 23 when his oxygen tent caught fire.

Hospital authorities blamed a short circuit for the blaze, which damaged the tent, the compressor and the mattress of the bed.

David Willis, 36, of New Haven, confined to the tent because of a heart condition, was awakened by flames shortly before midnight. He tried to beat out the fire, then ran into a corridor and told the nurse. The hospital fire brigade brought a hose line into the private room, and had the situation under control when New Haven firemen arrived.

TOM MAGNER

April Fire Losses

Estimated fire losses in the United States during April amounted to $78,632,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $78,632,000 loss represents an increase of 0.9 per cent over losses of $77,933,000 reported for April, 1954, and a decrease of 10.8 per cent from losses of $88,197,000 for last March (1955).

Losses for the first four months of 1955 now total $327,140,000, a decrease of 0.3 per cent from the first four months of 1954, when they amounted to $328,175,000.

These estimated insured losses include an allowance for uninsured and unreported losses.

How Fire Chiefs can . . .

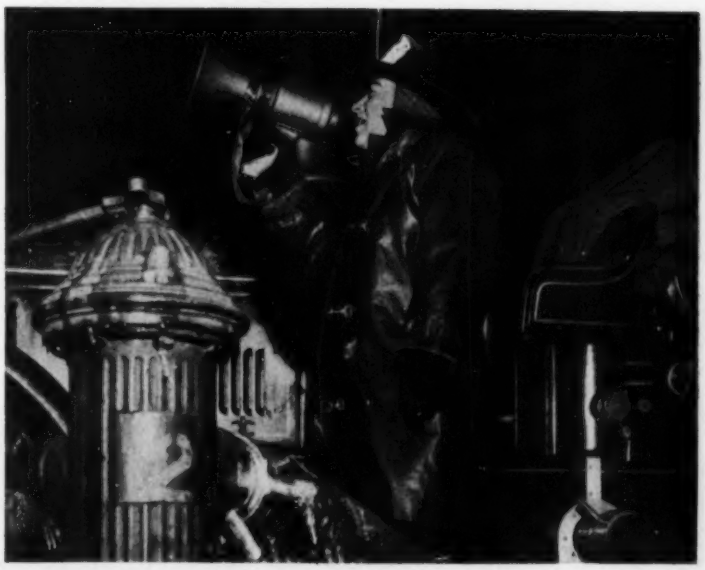
"Make themselves HEARD!"

AUDIO Hailer

Amplifies your voice 1000 times!

PORTABLE • SELF-CONTAINED • LIGHT WEIGHT
BATTERY OPERATED • WEATHER-PROOF

In emergency and rescue work . . . in regular training sessions . . . Audio Hailer enables you to deliver clear, exact instructions . . . instantly . . . over the din of a fire. Scores of Chiefs call it "the most useful single piece of equipment in the house!" A precision electronic instrument—light weight, weather-proof, always ready—the usefulness of the Audio Hailer covers virtually the entire range of a modern Fire Department's activity. Ask your supply dealer for a demonstration. Or write for descriptive folder.



AUDIO EQUIPMENT CO., Inc., 805 Middle Neck Road, Great Neck, N. Y.

With Our Readers

Mobile Rescue Unit for Fort Smith

To the Editor:

Several months ago the Sertoma Club decided to provide the City and this department with a Mobile Rescue Unit as a civic project. They came to us for ideas and recommendations as to the type of truck needed, and equipment necessary to equip it for all types of rescue. They wanted it complete in every detail, and our recommendations left nothing out. A few of the things were purchased and many more were donated by businessmen of the city.

Interior of Fort Smith's mobile rescue unit.

They brought us a ton panel truck and our mechanic painted it red; then we received a 14 ft. aluminum boat with a 5 h.p. motor, and we built a boat trailer to fit it. An underwater diving mask was bought that will last for one hour of continuous use under water, and was mounted inside the truck. We provided a resuscitator. Loudspeakers were mounted on each side, and they, as are the flood lights and 48-cup electric coffee maker, are powered by the 1500 watt power plant mounted in the truck and provided with a fused six circuit panel box for outlets.

A wheeled cart was made to handle the portable cutting torch and the power chain saw was strapped down. Other equipment includes siren, two way radio, first aid kit, blankets, stretcher, ropes, axes, picks, shovels, wire cutters, 20 lb. dry powder extinguisher, life vests, grappling hooks, extra gas for all motors, and last but not least, a supply of coffee for the coffee maker.

As every one connected with the fire service knows, a unit of this type should be in every department, but we, like so many others, had little hope of ever having one. But the Sertoma Club did a wonderful job, and we are very proud of it.

R. L. RUDD
Chief of Fire Department

Fort Smith, Ark.
Apr. 19, 1955

Fire Research Needed

To the Editor:

As usual, the current issue of FIRE ENGINEERING is full of interesting and worthwhile information. I was particularly intrigued by your "With the Editor Column"—particularly your reference to the need for a comprehensive fire research program.

Has anyone ever made an audit of fire research undertaken in recent years? It seems to me that there is a good bit of work now in progress but admittedly it is scattered and uncoordinated.

We, of course, have worked on home fires, magnesium fires, cotton fires and, to a limited extent, on fire-retardant treatments.

Stanford Research Institute is now working on cotton fires.

I understand that Firestone Tire & Rubber is doing work at Mellon on fire-retardant treatment for foam rubber.

Francis Earle Laboratories in Peekskill is working on basic reasearch with respect to magnesium fires.

The Bureau of Standards has done research on a variety of problems involving fire resistance of building materials, fire retardant treatments, extinguishers, etc.

Midwest Research did work on sprinklers that was later carried forward at the Factory Mutual Laboratories.

The latter group is now working on fire resistive roof constructions.

"Operation Firestop" on the West Coast and "Project Skyfire" sponsored in part by the U.S. Forest service and the Munitalp Foundation are excellent examples of cooperative research where several groups join hands in an undertaking.

Of course the Bureau of Mines, Civil Aeronautics Administration, the National Advisory Committee on Aviation, the Bureau of Ships, Wright Air Development Center, Engineer Research and Development Center and others are doing important work in specialized fields.

Private manufacturers like Walter Kidde, Carbide and Carbon Chemicals, Ansul Chemical and others are doing a certain amount of research either for themselves or on contract from government agencies.

This list is quite incomplete but it does indicate a lack of overall planning and programming and that much, probably most of the work, particularly of a fundamental nature, is financed by government.

I am not sure that government direction of most of fire research is a wise thing. You just can't get an adequately financed operation with a broad perspective within the framework of government hierarchy. The Bureau of Standards, if properly financed, could do it but there are very definite limitations on its activities.

Private enterprise in the field of fire prevention and protection appears to lack either the size necessary to finance comprehensive research, or interest to do more than keep just ahead of competition.

Why haven't the insurance interests done more to finance a research program? This could easily be done through an extension of Underwriter's Laboratories functions.

Quasi-public or non-profit research groups lack physical facilities to do much of the work and cannot acquire equipment without sizable research contracts. Matters that they can handle are limited by the situation in the industry.

It has been suggested that there be established a national fire research agency but without funds to set up the facilities the suggestion lacks substance. Government financing would be acceptable only if the facilities were available to industry, and salary levels appropriate to a highly competent staff were possible.

Perhaps FIRE ENGINEERING could stimulate some more thinking by publishing a review of research needs and activities in the fire service.

CALVIN H. YUILL
Director Fire Technology
Southwest Research Institute
San Antonio 6, Tex.
March 26, 1955

Fort Smith rescue unit on display in front of Fire Headquarters.

Flames Damage Five Companies

Two sections of an industrial building were destroyed and three others damaged, April 15, when fire caused an estimated $35,000 damage in the Ocean Park section of Santa Monica, Calif.

The fire followed an early morning explosion in the Diamilite Abrasives Company at 2301 Main Street and resulted in a 1000-foot column of smoke over the city and nearby Los Angeles.

Santa Monica firemen were endangered by exploding drums of plastic solvents.

David Yettra, owner of the building, said the Diamilite plant had recently been shut down. Other occupants reporting damage included the California Handbag Company facilities which were gutted, Freezit Distributors, Metal Forming Company and the S-M Manufacturing Sales Company.

—PAUL DITZEL.

IT TAKES A LOT OF

CONFIDENCE

(*based on past experience and good judgement*)

TO BUY, *in one order..*

W. G. Strickfaden, Fire Chief, Columbus, Ohio examines a portion of the shipment recently received from Bi-lateral Fire Hose Company.

Bi-Lateral! First to recognize the need for and construct fire hose with the Bi-Lateral feature.

First to change pin lug to rocker lug couplings.

First to offer FREE fire hose record cards to fire depts. They are still available.

6½ miles of FIRE HOSE!

Yes! A man must be *sure* of the value to his city before he places an order for 35,000 feet of fire hose. And with *Bi-lateral*, you *know* you can *always* be sure! Bi-lateral is the hose that is manufactured *without* a *single compromise*. As hose manufacturers we know we are dealing with *lives*, not dollars — and Bi-lateral Hose is built on the premise that "Safety is Worthless Unless it is *Absolute*."

Bi-Lateral® FIRE HOSE CO.

20 N. WACKER DRIVE, CHICAGO 6, ILLINOIS

News of the Manufacturers

B. J. March Joins Ward LaFrance

F. Norman Tracy, vice president and general manager of the Ward LaFrance Truck Corporation of Elmira, New York, has announced the appointment of Brook J. March of Emmaus, Pennsylvania as Manager of Sales for the Fire Apparatus division of the company.

Brook J. March

Mr. March is well-known in the fire fighting industry and comes to Ward LaFrance from the National Foam System, Inc., of West Chester, Pennsylvania, where he was manager of sales. He also headed the sales department of the Process Equipment Division of the Bethlehem Foundry and Machine Co. of Bethlehem, Pennsylvania, and formerly was chief engineer of the Heyden Chemical Corporation of Garfield, N. J.

New Type Salvage Cover

Fellowcraft Engineering, Inc., 270 Jelliff Ave., Newark, N. J., recently announced production of a line of "Herculite" tarpaulins and coverings of all shapes and sizes, including salvage covers.

The "Herculite" line is made from a new light-weight material which incorporates the use of nylon and vinyl plastic film. Among its features is high tear strength, easy to store, water-proof, rot and mildew-proof, with sun-fast colors. All seams are electronically welded.

Marvin M. Tallerman, president, says that with the use of this special electronic equipment, Fellowcraft has engineered the achievement of making the world's largest completely electronically sealed tarpaulin. This unit is 165 x 85 ft., and is to be used by a National League baseball park.

Comco Introduces Fleetcom Jr.

Communications Company, Inc., Coral Gables, Fla., announces its latest two-way radio Fleetcom Jr. Known as the Model 500 series, the unit is a moderately powered, inexpensive, self-contained two-way VHF-FM, designed specifically for use by small fire and police departments, particularly for areas where adjacent channel receiver selectivity is not necessary.

Suitable for operation in vehicles having 6 or 12 volt battery, it can be changed from vehicle to vehicle without any modification in the unit. Single power input plug determines the proper voltage connection. An AC adapter is also available for using the equipment as a small base station. This is considered an advantage in small fleets in that an inexpensive mobile unit can be moved from the vehicle and immediately installed as a base station. Having both A.C and D.C. provisions, the base station can operate from a 6-volt storage battery during the A.C. power failure. The A.C. power supply has a built-in trickle-charger for maintaining a standby 6-volt storage battery.

This equipment is on the F. C. C. list of equipment acceptable for licensing. Complete detailed information available from Communications Company, Inc., 300 Greco Ave., Coral Gables, Fla.

Air Purifier for Compressors

Odor-free compressed air for high pressure demand type breathing apparatus is now assured with the new Cornelius high pressure air purifier. The new air purifier is the first high pressure filter of its type developed. Using activated charcoal as a filtering agent, the Cornelius air purifier removes all odors which may develop due to improper maintenance of compressor or neglect of moisture trap. The unit is made by the Cornelius Co., 550 39th Ave. N. E., Minneapolis 21, Minn.

New Cairns Catalog

America's oldest manufacturer of fire helmets, Cairns & Brother, Inc., of Allwood, Clifton, N. J., marked its 119th year of continuous service to fire departments by issuing Catalog No. 35 on "Fireman's Equipment." The 48-page book opens with a brief history of the development of the fire helmet, from the original produced in leather by Henry T. Gratacap in New York, in 1836, to the modern line of Cairns Helmets in leather, aluminum and plastic.

The time-tested "regulation" style is presented in three Cairns helmets—"The New Yorker" in leather, "The Senator" in aluminum, and "The Clifton" in plastic. The catalog also describes Cairns helmets in the "drop brim" style, available in the three materials just named. Supplementing these helmets, the first line of defense in fire-fighting, the catalog presents the complete Cairns line of firemen's personal equipment including clothing, boots, gloves, caps, belts, badges, etc. A comprehensive line of department record books, secretary's books, certificates, and other printed forms is also catalogued.

New Catalog of Hose Reels

A new, 16-page illustrated catalog describing their complete line of hose reels for fire fighting equipment has just been released by Clifford B. Hannay & Son, Inc., Westerlo, N. Y. According to the Hannay Company, which has been manufacturing fire hose reels for more than 20 years, an outstanding feature of this new catalog is the "Ordering" page designed to simplify ordering, speed delivery and at the same time assure purchasers of getting the Hannay Hose Reel best suited to their individual requirements.

For the first time, the new space-saving, elevated motor reel which gives equipment designers greater flexibility in positioning fire hose reels is fully illustrated and described.

Specifications, as well as a clear description of the operational advantages of the entire line, are also included.

Copies of the catalog are available upon request to Clifford B. Hannay & Son, Inc., 273 Main St., Westerlo, N. Y.

Gorman-Rupp Names Brown

Ford D. Brown has been named Eastern Representative for the Gorman-Rupp Company, of Mansfield, Ohio. Mr. Brown brings with him over 15 years experience in the pump industry, having been associated with such firms as Bowser, Inc., Blackmer Pump Co. and Eco Engineering Co. Metropolitan New York through Eastern Virginia is the area to be covered by Mr. Brown. He resides at 20 Pomeroy Road, Madison, N. J.

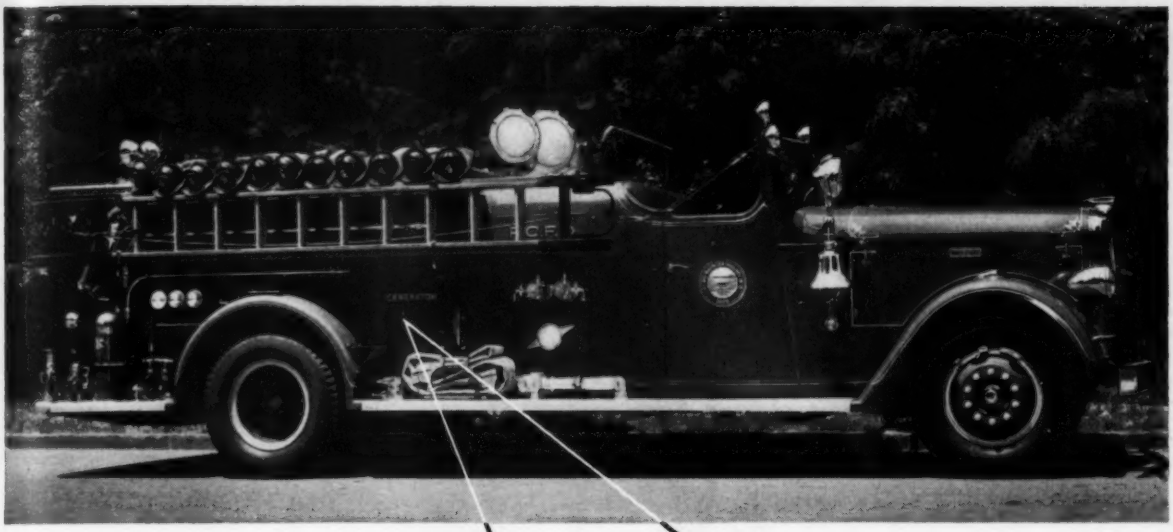
Fyr-Larm Co. Appoints McCoy

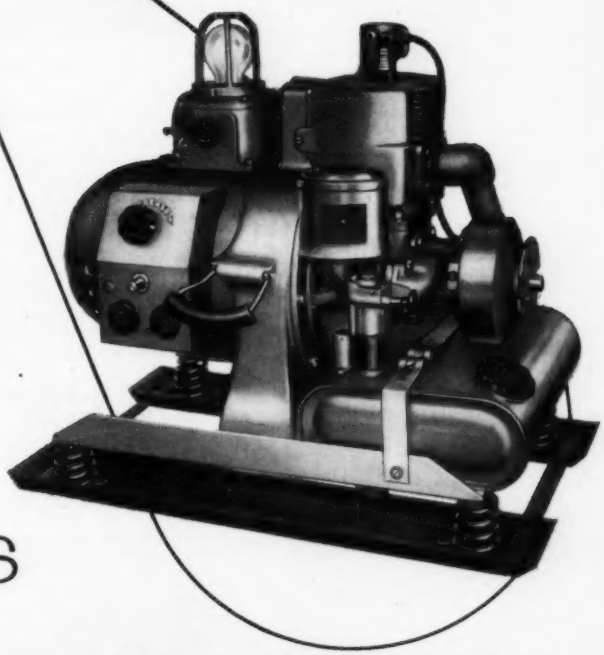
William C. McCoy, former Deputy Chief of the Suffolk County (L. I., N. Y.) Fire Training School, has been appointed Technical Director of the Fyr-Larm Co., Inc., of Summit, N. J.

Chief McCoy, a resident of Northport, L. I., N. Y., since 1948, has served as Long Island distributor for the New Jersey fire alarm firm since July, 1954.

A member of the Nassau-Suffolk Safety Council, Chief McCoy joined the Mitchel Air Force Base Fire Department in 1942. He returned to the Mitchel staff following World War II military service and was assigned as

(*Continued on page* 564)





FIRST CHOICE WITH FIRE DEPARTMENTS

Whenever you see a generator compartment on a fire truck, the chances are that inside . . . ready for a call . . . is a Homelite Carryable Generator. It's the number one choice with fire departments . . . has been for more than a quarter century . . . and for two good reasons. One, its small size and two, its big performance.

Very compact, a Homelite takes up a minimum of space on a truck. Light in weight, a Homelite is carried by one man. And famous for its dependability, a Homelite starts quickly in any weather . . . gives you the bright flickerless floodlight you need . . . and is not affected by rain, dust or ice.

Insist on Homelite Gasoline Engine Driven Generators. Always!

Manufacturers of Homelite
Carryable Pumps • Generators
Blowers • Chain Saws

PERFORMANCE · DEPENDABILITY · SERVICE

HOMELITE
CORPORATION
306 RIVERDALE AVENUE • PORT CHESTER, N. Y.

Canadian Distributors: Terry Machinery Co., Ltd., Toronto, Montreal, Vancouver, Ottawa.

FALSE ALARMS

Conscious at Rank

Captain Paul Adams, of the Bakersfield, Calif,. F.D. tells this one:

A group of city sportsmen annually went to hunt on the property of a man who catered to such groups. On this particular occasion the proprietor explained he had a specially trained hunting dog available for hire, but that his fee was higher than that for the regular hunting dogs.

The group agreed to pay the premium for the "special" hunting dog and were instructed that the dog's name was "Fireman." "Fireman" proved to be almost uncanny in his ability to spot birds and in a short while all the group had their limit of birds.

The following year this group returned and asked for "Fireman." However, they were told by the proprietor that the dog had been ruined as a hunting dog, and on being asked for details explained it happened like this:

"Well, a group of fellows were out here just after you boys came last year and one of this bunch made the mistake of calling 'Fireman' 'Captain' and ever since then all he's done is sit on his tail and bark at the other dogs."

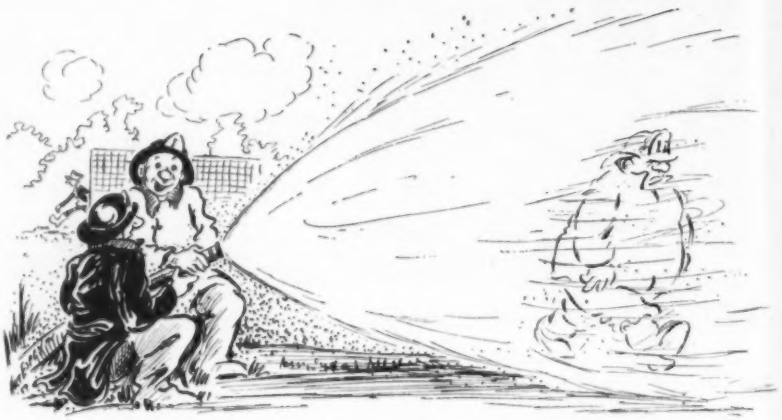
Jackpot

Rube Rodent, who raises rabbits on the side, says they converse with each other just like human beings. Says he was down at the hutch the other night and overheard Mama Rabbit saying to Papa Rabbit, "Peter, you now have 32. Would you like to try for 64?"

Wife (in back seat): "Don't drive so fast, George."

George: "Why not?"

Wife: "That policeman on a motorcycle behind us can't get by."



"Cap? Oh, he's probably wanderin' around in a fog somewhere!"

Preference

As the inquisitive man sat in the park, he watched a tramp coming along, picking up cigarette butts. Then the tramp sat down on the seat and began sorting his spoils. Presently he threw a long one away. This was too much for the curious onlooker.

"Excuse me," he said. "That looked like a good one. Why did you throw it away?"

The tramp drew himself up proudly and replied: "It ain't my brand."

Huckstered Buck

We nominate for the honorary degree of Master Huckster, Mr. Heinz Glaeske, vice president of G. Krueger Brewing Company.

Tide tells how midway in his pep talk at the company's spring sales meeting, Mr. Glaeske shouted, "Get up, everybody—look at the bottom of your chair!"

The astonished salesmen looked . . . and found a crisp new dollar bill pasted there. "You can keep the dollar," added the speaker. "We just wanted to demonstrate that nowadays you've got to get out of your chair, if you want to make a buck!"

Sedentary work lessens a salesman's endurance. In other words—the more you sit, the less you can stand.

Confused

The dean of women at a large coeducational college announced sternly to the student body, "The president and I have decided to stop necking on the campus." Met by gales of laughter the woman continued, somewhat flustered, "Furthermore all the kissing that has been going on underneath my nose must be stopped."

Seventy-five-year-old: "When I die I'd like to do it in a car crash doing 80 miles an hour."

Eighty-five-year-old: "I'd like my finish in a 400 m.p.h. plane."

Ninety-five-year-old: "I'd like to be shot by a jealous husband."

Poor Bait

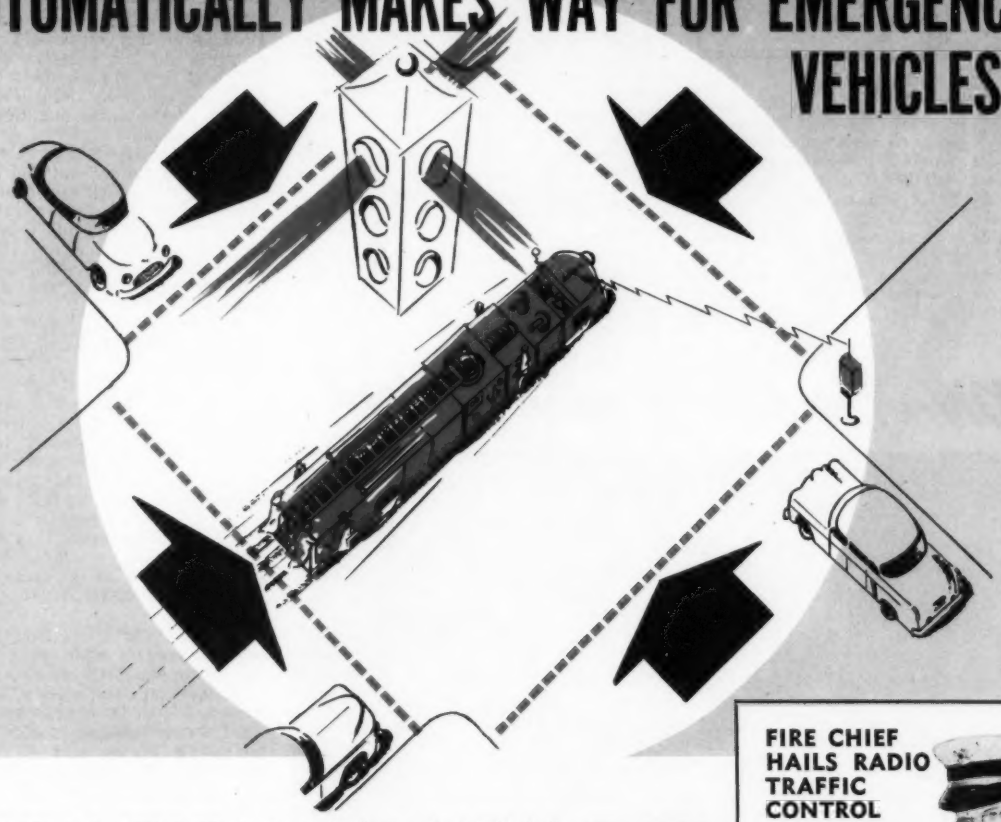
The father and son were engaged in a heart-to-heart discussion. "I hate to say this," interjected the father, "but I don't think much of that girl you've been dating."

"I don't either," replied the son. "But what can I do? She's the best I can get with the car we've got."

Wife said to her husband after several quick rounds of drinks at a party: "Don't take another cocktail; your face is already getting blurred."

"Are you positive you opened the hydrant all the way?"

AUTOMATICALLY MAKES WAY FOR EMERGENCY VEHICLES



REVOLUTIONARY NEW EL-TEC
RADIO TRAFFIC CONTROLLERS
Lets Emergency Equipment Clear Its Own Route With CONTROLLED TRAFFIC SIGNALS!

Easily installed on Emergency Equipment to Control Traffic Lights by Radio . . . Safeguards lives of personnel . . . Safeguards equipment . . . Safeguards motorists . . . Gets equipment on the scene sooner, safer!

Mr. Fire Chief! *Before your men can fight a fire, they've got to fight traffic.* You can train a man to be a good fireman because you know all the hazards of fire-fighting. What you don't always know is what happens from the time they "roll" and the time they reach their destination.

SAVE LIVES **SAVE TIME**
SAVE EQUIPMENT **SAVE MONEY**

New emergency radio traffic control signal system permits fire and police apparatus to control traffic signal lights from their vehicles—automatically!

Here is how it works:

EL-TEC equipment consists of a compact, weatherproof UHF transmitter unit fastened to the inside of the fire wall under the dash. Its transmitting antenna mounts atop the center of the hood out of the way. Receiving antenna is mounted atop the traffic signal units or atop a control box.

Once the apparatus is on the street, a switch on the transmitter is thrown. Immediately, it transmits its message to the receiver which automatically activates the lights in this manner:

- **The yellow caution light flashes in all four directions for three seconds. Five flashes to the second.**
- **After that, a steady red light stops all vehicles in all directions—or green light is given the emergency vehicles with all side traffic stopped by red light, as preferred.**
- **An important feature of this system is that the flashing yellow also serves as a special signal in the event two emergency vehicles are approaching the same intersection.**
- **The high frequency beam will activate all lights for approximately 1000 feet directly ahead of the moving vehicle.**
- **After the vehicle passes the intersection, the signal lights resume their normal cycle.**

Get information on EL-TEC Radio Traffic Controllers for *your* community. Information and competent surveys will be furnished without obligation. Write:

Electronic Protection Inc.

452 W. Chicago Ave., Chicago 10, Illinois

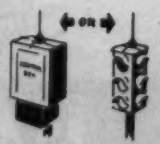
THE ONLY FCC APPROVED SYSTEM FOR EMERGENCY VEHICLE TRAFFIC CONTROL

FIRE CHIEF HAILS RADIO TRAFFIC CONTROL

Fire Chief David C. Smith of Maywood, Illinois—the first city in the world to have this protection — tells what EL-TEC Radio Traffic Controllers have meant to his community: "After seeing this system in operation, there is no doubt in my mind that it affords a solution to one of the most important safety problems a fire chief has."

EASY TO INSTALL ON *PRESENT EQUIPMENT*

Compact UHF Radio signal transmitter unit fastens to vehicle, out of the way, under the dash.



Receiver antenna and receiver mounts either atop a traffic signal unit or a control box—lights operate by signal automatically.

Among the Buffs

By Paul C. Ditzel

DEADLINE time this month finds me about to leave for San Francisco where I'm going to research a story on assignment from a national magazine. The article will be of great interest to buffs and I'll let you know when it is published.

Speaking of national writeups, how many of you noticed the syndicated story on Baltimore's Box 414 Association? This is, as you probably remember, the club that is frequently mentioned in this column, thanks to Ray Wheatley, 1813 N. Montford Ave., Baltimore 13, who keeps me posted.

The syndicated story appeared in Los Angeles newspapers recently and reminded me that Ray would welcome articles from any buff clubs for the excellent newsletter published by Box 414. Ray also says he'll be glad to place any clubs on his mailing list.

Baltimore recently suffered a tragedy which took the lives of six firemen. The club promptly took an active role in a collection for the families of the dead firemen.

"Our collection," says Wheatley, "from jars placed around the city and other means of collection came to a total of $5938.50." The legislature of the State of Maryland adopted a resolution commending the club for its work in aiding the fire department.

The resolution pointed out that the association has for many years been a "great aid and comfort to fire fighters" and Box 414 members "have demonstrated on many occasions their possession of the finest qualities of American citizenship."

Representative Edgar P. Silver's resolution also pointed out that the Box 414 members' "unselfish sacrifices during the time of fire are an inspiration to the people of Maryland and they again rendered invaluable service to the fire fighters of Baltimore City during the recent tragedy which took the lives of six firemen."

The "sincere gratitude" of the House of Delegates of Maryland was expressed to the club.

As one buff who's never wanted to be a member of any club anywhere, I'm happy to report this tribute to a great organization. I've closely followed the work of Box 414 for many months and regret that space limitations make it impossible for me to fully describe the civic pride of its members. This latest honor bestowed upon Box 414 couldn't have happened to a finer outfit. I regret that I live so far away from these fine gentlemen. I'd like to know them better.

Some of the clubs that I've briefly come in contact with could well take a page from the book of Box 414. What with the criticism leveled at so many buffs on the lunatic fringe—many of them banded together into clubs—it's refreshing to be able to report this recognition to a worthy organization.

Incidentally, Box 414's Editor Wheatley was complimented in a recent issue of "The Third Alarmer" put out by Al Schuman in New York.

"Paul Ditzel who writes the buff column in FIRE ENGINEERING noted that the Baltimore Box 414 Association publishes an excellent monthly newspaper," says Al in his Arm Chair Observations, a part of the club's newspaper.

"To this we say, 'you are so right.' . . . It is an extremely well-printed and well-edited bulletin and our congratulations to the person responsible for creating this interesting journal."

"The Third Alarmer" makes the claim that it is the first regularly published buff club newspaper and says it'll hear any arguments to the contrary. I wish the club paper carried its mailing address. So many of those that are mailed to me regularly don't carry the designation of the city, much less a mailing address.

From Buffalo—my old home town—comes a note from Gary R. Pohzehl, 228 Delaware St., Tonawanda, N. Y.—that he recently took out a subscription to FIRE ENGINEERING to help build up his collection of firemania. He lays claim to 23 scrapbooks filled with newspaper clippings, two photo albums, about a dozen badges, 30 or 35 fire books and two fire engine models. He'd like more! Gary says he'd like to hear from buffs around the country who would care to send him clippings and photos.

Also from Buffalo, comes a clipping about a man who is probably the city's oldest retired fireman, Frank E. Hill, 170 Goembel Ave. Brother Hill spent 21 years driving motorized equipment but said that for the short runs the

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horse-drawn equipment was just as good.

"Once in competition at Engine 27," he told the Buffalo "Evening News," "we hitched our three-horse team and were underway nine seconds after the alarm sounded. Not many motorized companies today can pull out faster than that." Nine Seconds?

Letter from Chief Arthur M. Anderson of the Friendship First Aid & Emergency Squad, Inc., 4512 Harriet Ave., South Minneapolis 9, Minn., says he recently met with my good friend and Marine Corps pal, Joe McCarthy, (not the Senator) who heads the Chicago Fire Department's ambulance service. Captain Joe is a Congressional Medal of Honor Winner and a great guy. (This unsolicited tribute from a former Marine Corps sergeant.)

Chief Anderson said he'd like to hear from any buffs who are interested in the first aid and ambulance service branch of the fire service.

That's it until the bells go down again next month. The sand dune hasn't shifted much since I last wrote and I'm still holding forth from 419 Napoleon St. Playa del Rey. Guess I'll drop down to the beach for awhile. Nine seconds, hmm.

L. A. County

(*Continued from page* 511)

The department has a Benefit and Welfare Association to assist personnel in time of need; an active Ladies Auxiliary in each battalion; a federal credit union. Personnel are represented by two A. F. of L. Fire Fighters Unions. All personnel are members of the County Employees Retirement System.

A full-time chaplain, Capt. Edward F. Spruill, works under Chief Klinger, and does much sick visitation and personnel work. Capt. Spruill is a veteran of more than 20 years on the department and was assigned to Engine 57 until his full-time assignment as chaplain.

(*To be continued*)

London Salvage Corps

(*Continued from page* 513)

This comment about working harmoniously with the London Fire Brigade was never better exemplified than during the Second World War with its attendant blitz. It was an unprecedented period of peril and toil that faced the great City's firefighters, including members of the Salvage Corps.

In 1941, to cope with the needs of augmented salvage corps work to minimize the effects of incendiary raids, arrangements were made for fire service personnel to be trained in salvage operations by members of the Salvage Corps.

Conversely, as the war went on, Salvage Corpsmen often had to give up any hope of performing salvage work, and joined with their heroic London Fire Brigade comrades to battle the raging fires caused by the Nazi bombers.

One fire officer told FIRE ENGINEERING'S correspondent that some of their responses during an air raid would take them five or six miles from their station to attend a serious fire. En route to the fire they would pass "dozens and dozens" of fires which were of second alarm proportions or better.

Citizens would run into the street sig-

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naling them to stop but the salvage rigs, which carried portable pumps hitched on behind, would continue to the fire ground to which they were ordered.

It is said the Watling Street headquarters of the Corps escaped serious damage when a 500-pound bomb smashed a building directly across the street. Windows and doors of the Salvage Corps headquarters were pushed in, but no other serious damage was suffered by the organization. The two other stations, located at Islington and Southwalk, escaped damage during the blitz nightmares.

Answering all alarms within a three mile radius, the Watling Street Station turns out with a stubby, enclosed vehicle. It is known as an immediate turnout appliance and carries an officer, driver and two men. The Corps thinking is that it is better to keep a large reserve force at headquarters than to roll more men than may be required for the average response.

The three Stations of the London Corps are so located that a salvage unit can be on the fire scene within a few minutes of a call for additional help. There is no automatic move-up, or change of quarters when one station is emptied for a large fire in its sector.

It is a practice for the officer in charge of the immediate turnout to report to the Salvage Corps' control board within five minutes after he has left the station. If more help is required, an additional and more completely equipped unit responds.

Salvage rigs in the other two Stations respond only to specified tasks in their areas and go to other alarms only on receipt of the London Fire Brigade Chief's radio message for help, which is relayed to the London Fire Brigade fire control office.

The Corps receives all calls to the London Fire Brigade, and the latter calls the Corps after it has dispatched its own equipment. The Brigade also notifies the Corps of all messages which the officer in charge of the fire radios or telephones back to what may be called the Fire Alarm Office. The Salvage Corps has direct telephone lines to the London Fire Brigade Headquarters at Lambeth Walk, and to the Middlesex Fire Brigade (this town, just outside London, calls the Salvage Corps on all alarms on which the Corps would most likely attend if the fire is of sufficient proportion to warrant a turnout).

The Corps also responds to fires in the counties of Surrey, Kent, Essex and Middlesex. Working arrangements are also maintained with the fire brigades of the county boroughs of Croyden, East Ham, and West Ham, and the County of Hertfordshire.

Corps Makes Use of Photography

It is said that the Corps makes excellent use of photography in its operations. Developing facilities are at the Watling Station. Extensive use of still photography is made to direct the attention of insurers to special features found when carrying out salvage work. This is said to be especially valuable in cases where circumstances indicate the probablility or possibility of subsequent fire outbreaks.

In its operations, the London Salvage Corps parallels to some extent the procedures followed in this country. As soon as the Salvage Corps officer-in-charge arrives at a fire, he must make a quick survey and size-up and then send his message back to his station, as we have said, describing the situation, from the Salvage Corps point of view. If he needs more units, he so indicates. A multi-alarm fire may offer little opportunity for salvage work, but a predetermined assignment (box alarm in this country) might call for little fire fighting, but extremely heavy salvage operations for the salvage crews. Actuation of sprinklers is an example.

Following much the same pattern in vogue in this country, when fire involves the upper floors of a building the salvage crews or crews take a position immediately below the fire and cover the contents with the waterproof covers. These covers vary in size from 18 x 15 ft., presently the largest, to 12 x 10 ft. It is understood the force is experimenting with larger covers, and with different types of materials. Like our own salvage experts, they have found some difficulty in using the very large covers with limited manpower.

After spreading covers on the floor immediately below the fire floor, the crews then work their way down to the next floor, and so on progressively until they reach the first floor. Salvage Corps procedure calls for a minimum of one officer, a driver, and six working men with each second turnout appliance (vehicle).

After covers have been placed, the Corps then begins the task of clearing out the water, using brooms, squeegees, etc. In the main the procedures for dewatering and rehabilitating damaged property are much the same as those

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employed in American salvaging operations. One point is interesting: to convey water from a building, the Corps often uses telescoping pipes which they have carried for five or six years. These pipes extend to varying lengths and they make it unnecessary to nail covers to walls or other objects as the pipes form standards on which salvage covers are hooked. Covers are used as channels to convey water from the fire building.

After the fire is extinguished, the Corps, much after the pattern in this country, details a man at the scene to prevent looting, and keep a check on the covers, and watch for any rekindle. There have been occasions where a man has been detailed for as long as a month.

Information is lacking concerning the use of deodorants and smoke removers but it is understood the Corps uses fans and air movers when occasion requires.

The rubberized "sheets," as contrasted to American canvas-treated tarpaulins, weigh about 15 lbs. in the 12 ft. x 10 ft. size and are very pliable. They are stowed flat-folded one on the other. Canvas covers are used, however, in two sizes, the larger 15 x 12 ft. and the smaller 12 ft. by 12 ft. They weigh 28 and 23 lbs respectively. They are used primarily for bulk salvage operations and for temporary protective coverings of roofs, etc.

1954 Fire Losses Show Small Drop

The nation's fire losses in 1954 totaled $870,984,000, it was reported recently by the National Board of Fire Underwriters. This is 3.6 per cent less than that for 1953, when estimated monthly losses totaled $903,400,000.

According to the report, the number of fires in urban areas totaled 845,116, a decrease of 8 per cent from 1953, when they totaled 918,304. A refinement of this figure showed that building fires decreased 4.2 per cent, dropping to 399,182 from the previous year's total of 416,543.

Further analysis indicates that of these 399,182 building fires, a total of 289,379 were in residences and amounted to a decline of 1.8 per cent from the previous year, when they totaled 294,737.

The report found that no pronounced trend in residential fires was discernible by population groups. However, in the manufacturing classification, fires definitely declined in all population groups, with those in cities of one million or more and those of 100,000 to 250,000 showing the greatest decrease. The decreases amounted to 28 per cent in cities of one million or more population and 26 per cent in those of 100,000 to 250,000.

On the other hand, the report pointed out, these two groups of cities were the only ones in various population groups to show increases in the number of mercantile fires. The increases amounted to 22 per cent in cities of one million or more, 11 per cent in cities of 100,000 to 250,000.

The over-all decline in mercantile fires throughout the nation amounted to 3.2 per cent when compared with 1953, or 44,610 in 1954 as against 46,083 in 1953.

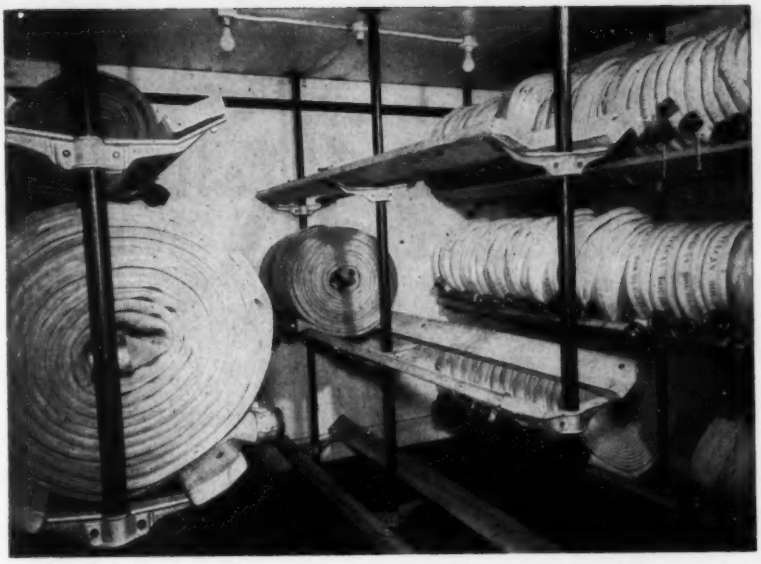

Photo Courtesy Wichita Fire Station No. 1

The Solution to Hose Storage Problems

FEATURES

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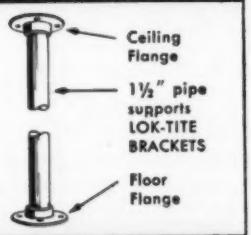
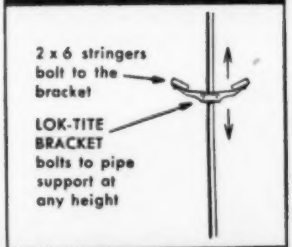
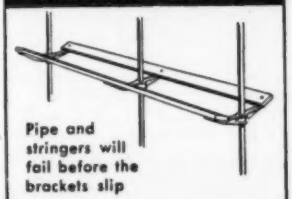


EASY ADJUSTMENT



BIG LOAD SUPPORT



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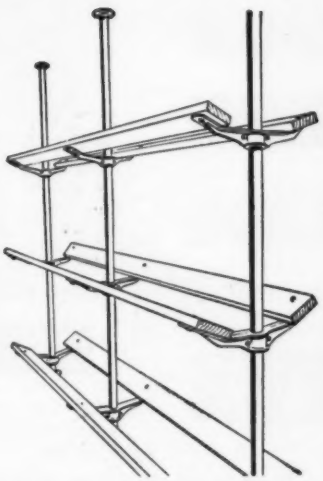

MIGHTY few station houses have all the room they need for good housekeeping. Lok-Tite brackets help solve the hose storage problem by allowing ample ventilation and access in limited storage space.

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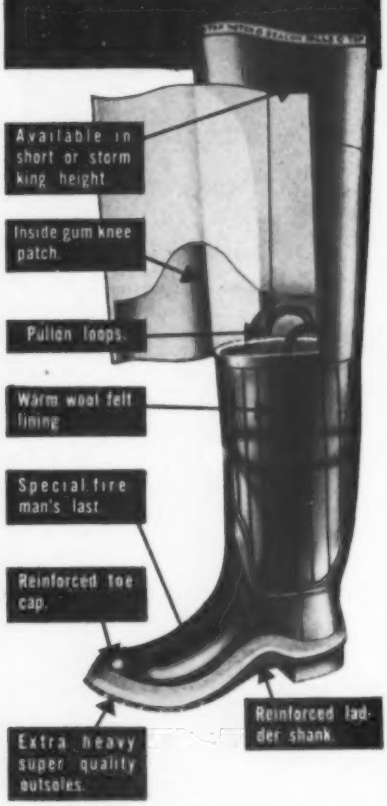
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The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

'Doggone' April Fool's Joke

According to the firemen, this was one of the April Fool jokes of the year.

It happened at the little settlement of Lake Pleasant, Mass., when an alarm was registered about 8:20 P. M. April Fool's night, for a fire in an auditorium used by a group of spiritualists.

The auditorium was located amid a number of summer cottages, now used by year-round residents. There was a nice conflagration hazard for the volunteers, who came from three fire districts in the town of Montague—and for the others called to the scene from Turners Falls, Millers Falls and Montague Center, in the Town. Several other departments, including Greenfield and South Deerfield, moved in to cover.

Upon arrival, it looked to the volunteers like the entire settlement was in danger and, while some of the forces attempted to come to grips with the auditorium blaze, others were detailed to protect the exposures.

Among the latter was a house across the road from the fire. It was locked and the tenants apparently away. But upstairs, at the window, appeared a pretty cocker spaniel pup.

Attention of the vamps was called to the pup, and to the fact that the house was getting "heated up." Obviously rescue was in order. So, as the place was locked, a ladder was raised, the glass knocked in and the lads prepared to bring down their "trapped victim" when it was found that the animal was only a stuffed specimen.

The house reportedly still stands, with its one gaping window. But the pup—well, deponent saith not.

THANKS JAMES FITZGERALD

* * *

Politician's "Burning Issue"—Non-Political

City Councilman Robert Daubert, seeking re-election in Danbury, Conn. last month, told this'un about a burning issue—not in line of politics.

Seems the Councilman's wife left some clothing alongside an automatic washing machine in the kitchen and went out to do some shopping. In some manner the electric toaster slid from its place atop the machine and dropped onto the clothes. In the process, the toaster switch was tripped, and set the heap of clothes on fire.

Believe-it-or-not, the blaze burned through a hose leading to the washer, and the ensuing stream doused the fire. Damage—$175.00.

* * *

Heroine, 13, Saves 4, Gets $1 Reward

When you dish out the medals, don't forget 13-year-old Rosemary Pacheco of Chicago, who saved three younger sisters and a brother from their flaming home, and was injured in the effort.

Rosemary, nursing a sprained ankle, proudly told her friends that her father gave her $1, which she said was "plenty of reward" for her deed.

The girl, a seventh grade student, led her sisters Mary, 11 and Dolores, 9, and her brother, Sam Jr., down a smoke-filled back stairway. Then she ran back upstairs through heavy smoke for the baby, Theresa, 11 months, and summoned help in the person of Robert Hildredth, 30, a Commonwealth Edison Co. meter installer.

Unable to escape via the stairs with her litle charge, Rosemary dropped the baby into Hildredth's arms from the second floor window. Then the plucky girl lowered herself out of the window and jumped 20 feet, injuring her ankle.

* * *

How to Drive Fire Alarm Supers Nuts!

Fire alarm and police communications superintendents, and phone company officials, down Orlando, Florida way, all agree that a daily column in the Orlando Sentinel has a lot of readers. But they fervently hope the little lady who writes it won't ever again use a phone gimmick to demonstrate that readership.

Jean Yother, who conducts the column, printed an offer of a month's free pass to the first 25 readers to call a movie theatre.

The phone exchange serving the theatre was so jammed up by calls that important communications to fire, police, hospitals and others couldn't get through.

* * *

Yes, We Have Some Bananas!

George Bostwick, 43, was piloting a load of bananas from New York City to Syracuse, N. Y. when he stopped his vehicle in the center of the business district of the slumbering village of Middlesburg, Schoharie County, about 40 miles southeast of Albany, N. Y.

The driver walked to the rear and was opening the doors of the big tractor-trailer when a blast blew the truck apart, knocked him to the pavement with first and second degree burns, and scattered bananas all over the area. The explosion was heard throughout the village and in outlying sections. Telephone service in one section of Middleburg was interrupted for a short time.

The blast was attributed to a gas heater used to keep the load of bananas from freezing. State police said the heater, in the rear of the aluminum-like body trailer, was fueled by propane gas; but what touched off the explosion was not learned.

With the blast a huge sheet of flame shot out of the rear of the trailer. Windows were blown out of business places 100 feet in each direction. Damaged were a supermarket, a meat market, a church, a law office and several small shops. The fire was quickly extinguished; Bostick was rushed to Albany Hospital where it was said he would recover.

* * *

Hot Off the Tape

A thief broke into Philadelphia fireman Lester Smith's auto, parked at his fire station, 19th and South Sts., early on an April morn' while the crew of Engine Co. 1 was fighting a blaze, and swiped a new suit, slacks and window curtains. . . . Fire Department Engineer B. L. Renn of the Hampton, Va., Fire Department, served as his own reinforcements recently when fire broke out in a residence. He drove one fire truck to the blaze, then ran back to the station house and drove another truck over.

It was faster'n using radio, reports said: the house was right around the corner from the fire station. . . . In Helena, Mont., a car with 25 lbs. of dynamite in it went out of control, shot off the road shoulder, bumped along for 270 feet, climbed onto the highway, crossed, and went into a ditch, traveled another 150 feet and turned over at least once. Then it stopped. The driver got out with minor bruises, cuts—and shock—who wouldn't with that load! The dynamite failed to explode. . . . The press of the weekly Stapleton, Neb., "Enterprise" was running full speed and Editor Mentor A. Brown was busy, amid the din of the machinery. So, he said, he got quite a surprise when he opened the door to find water streaming off the roof of his plant. Seems that three doors down the street firemen were dousing a business house fire. Editor Brown's press had drowned out the noise of sirens, fire fighting operations and the big news story in the making right next door. . . . Garland Rhemann, 27, was killed near Brookshire, Tex., May 3, last, when his bulldozer broke open a natural gas pipeline. The ensuing explosion shot flames 250 feet into the air. . . . In Memphis, Tenn., Old Glory came down with honor at the Convent of the Good Shepherd, thanks to the skill of fireman V. B. Waldron with a casting rod. Sisters called the fire fighters when the halyard on the flagstaff broke. A fireman atop the ladder couldn't reach the loose rope, but Waldron—a piscatorial hotshot, nailed it with a few casts of his trusty rod and brass plug. . . . In Brevard, N. C., Brevard College officials took bids on tearing down an outmoded house on the campus. But judgment, and economy, prompted 'em to use the better way out. They called on local fire fighters, who used the structure for a fire extinguishing demonstration. . . . The sun touched off a two-alarm blaze that ruined 1,000 creosote-soaked railroad ties stored at Alameda Ave. and Beach 65th St., Arverne, Queens, April 10, last, causing damage estimated at $80,000. . . . One hundred and twenty-two New York probationary fire men had just been sworn in on April 3rd as regular, by Fire Commissioner Edward F. Cavanagh, Jr., at 31 Engine's quarters on Lafayette St. when an alarm sounded. The Commissioner grabbed his hat, topcoat and followed the apparatus to a fire in a plastic sunglass manufacturing plant. As to the probies? Department saith not.

* * *

Ambulances Ready and Waiting for Crash

Ambulances sped to the scene of a train crash 50 miles from Johannesburg, South Africa, on May 17 last, and arrived minutes before the accident occurred.

It all came about when station masters of Devonettoevlug and Toevlug, north of Johannesburg, realized that two freight trains were speeding toward each other on the same track. The railroad men were powerless to warn or stop the two trains so they called for ambulances to be on hand when the collision occured. It did—and they were.

Fortunately, no one was killed, but one engineer was hospitalized with head injuries; all other trainmen managed to jump clear before the crash. Several freight cars and the engines telescoped, blocking the line, but no fire occurred.

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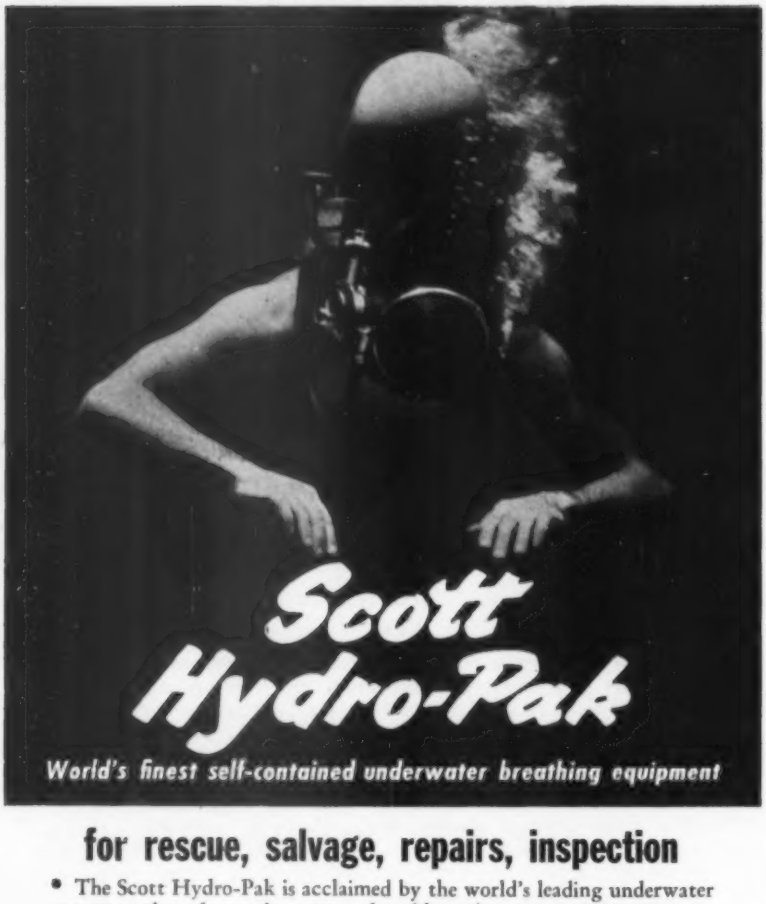

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Ambulances

(*Continued from page* 516)

elapsed before their arrival the boy's life could not have been saved.—OLD FORGE VOLUNTEER FIRE CO., OLD FORGE, N. Y.

New Jersey Coast: Voluntary ambulance service got a big start in New Jersey, where the ambulance units made great names for themselves. Here are two instances, from the records of the Ocean Grove Fire Department First Aid Squad, Ocean Grove, N.J., which emphasize the value of persistency and careful handling:

CASE 1. In a submersion incident, a very young boy's life was saved although he had been given up for lost. Persistent resuscitation eventually brought him around.

CASE 2. The proper emergency operation in handling a young service man (Navy) who received a broken neck while diving. The first aid treatment prevented further injury such as paralysis and possible death. The work was so done that the patient remained in the Department's ambulance instead of being transferred to a service vehicle; he was removed to a New York City hospital with proper government attendants.

From Virginia: We're glad to say that two of our local citizens are alive today as a result of quick action of our crew and the fact that *we had the necessary equipment.* These two men were overcome by gas in the basement of an old grain elevator. Two of our men wearing Scott Air Paks went into the basement and brought the men out. We then used dual connection on our Emerson Resuscitator and, working on both men at once, were able to revive them.—BUENA VISTA FIRE DEPARTMENT, RESCUE SQUAD, BUENA VISTA, VA.

From New York State: During the war we were very short of firemen and we placed a woman in the fire department, and made her an honorary fireman. She made herself available to the service 24 hours-a-day and she did great work in saving the lives of several babies that were born in the ambulance. Mrs. Meta Warrander will always be remembered by the people of Port Washington for her courage in this hard work.—PORT WASHINGTON FIRE DEPARTMENT, INC., PORT WASHINGTON, L. I., N. Y.

From New Jersey: In 1939 the Carlstadt Emergency Squad of the Town of Carlstadt, N. J., was called to East Rutherford, N. J., on one of the most tragic disasters in its experience. A flash flood caused the drowning of two children, and two adults who tried to save them were washed into the open sewer culverts. The Squad searched almost two miles of sewer lines from early afternoon until dawn the next day before all the bodies were recovered.

In 1942 the Squad aided Passaic in a disaster in which 20 people drowned, when a bus crashed through the Eighth Street Bridge into the Passaic River. Six persons were saved. The Squad received the praise of City officials and spectators for its excellent work.

From New Jersey: The Union Fire Company Rescue Squad of Washington Crossing and Titusville, N. J., has performed many heroic acts in the waters of the area it covers. In one incident the Squad rescued the personnel of a neighboring Squad after its boat had upset. More recently, four boys were

rescued from the Delaware River in heavy slush ice at 10 above zero near Trenton, N. J. It was impossible to do anything with a helicopter volunteered by the N. J. National Guard. Two of the Union Squad members set out with a fire axe in the Squad's boat, propelled by an outboard motor, and hacked their way through 1500 feet of ice down and back to effect the rescue of the four boys. This was done in the dark of night.

From New York State: Many babies are born in the vehicles of Emergency Ambulance Squads but it remained for the Emergency Relief Squad of the Valley Stream, Long Island, N. Y., Fire Department to officiate at a multiple delivery when twins arrived as their ambulance was en route to a hospital.

From Virginia: Fire and rescue squads demonstrated their efficiency on Easter Sunday, last, during the fire that swept most of the business section of Bowling Green, Va.

Crash trucks from Ashland and Henrico were on hand together with first aid and rescue units from Colonial Beach, Fredericksburg and Tappahannock. The Rescue Squad from Bethesda-Chevy Chase, Md., although not summoned, responded with crash truck and squad car after hearing about the fire over the public radio.

An onlooker was heard to remark: "Never in all my life have I seen anything like the way the men worked together . . . when firemen went into a building or near a wall, either a squad car moved near or some men wearing a rescue squad uniform were there; never was a command voiced — those men knew what to do and did it without waiting."

New Jersey: For the second time in the history of Metuchen's First Aid Squad, two emergency calls were received simultaneously.

On April 5, 1955, at 4.45 p.m., the squad received a call to take a patient from the Middlesex Nursing Home to Muhlenberg Hospital, Plainfield.

Within a minute, a second call was received to rush a Main St. resident to Perth Amboy General Hospital for emergency operation. The squad's two ambulances answered the calls. Six months ago a similar event took place.

A squad member said that although simultaneous calls for help are everyday occurrences with large city squads, they are a rarity in Metuchen.

Fire Chiefs Agree on Advantages of Volunteer Emergency Service

The real, and final, test of volunteer emergency service in the fire department, are the opinions of those who operate such services. Asked if they would recommend that fire departments adopt ambulance emergency service, only a few respondents replied in the negative. It was disclosed that those squads and corps were not a part of a fire department but operated independently of it. An equal number of respondents, while recommending installation of such service, qualified their endorsement by pointing out pitfalls and handicaps to organizing and maintaining such a service.

A New York Squad leader said "Go ahead! It will mean a lot of work on

1948 . . . Michigan Firemen had their hands full with this warehouse fire, which, they said, was the worst in several years. The sprawling three-story building was occupied by several industrial concerns. Damage was estimated at $500,000. (Int. News Photo)

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the part of the firemen, but it's worth it."

The Chief of an Ohio Squad approved in these words: "Yes, there should be a rescue unit (and ambulance service) in every village!"

A New Jersey Corps writes: "By all means (install it). Because a few squads started giving ambulance service, it has now grown to international proportions. More squads are needed to keep more people aware of, and trained in emergency first aid."

Some of the other reasons advanced by respondents are:

"It gives firemen a feeling of security." (Va.)

"Yes, not as a squad, but as a component controlled by the fire department." (N. Y.)

"It builds better relations." (Wash.)

"It creates good public opinion for the fire service and provides immediate assistance when needed in the fire department." (N. Y.)

"To make the department's town a better place in which to live. Gives added protection to fire department members." (N. J.)

"Once the people get it, they will never be without it." (N. J.)

"I find it helps to create more interest in the fire company because of more activity over fire protection." (N. J.)

"It is good protection for the firemen and, especially in our part of the country, the people seem to turn to the fire department in time of disaster, whether it be fire or accident." (Ore.)

Some sensible warnings were handed out by a number of those who voted to include ambulance service in the volunteer fire departments. Here are a few:

"Of course this (installation of ambulance service) can be overdone. The cost may well be too much for one small community." (N. J.)

"If they can operate on a volunteer basis." (Pa.)

"Be prepared for organizational difficulties." (N. Y.)

"Strictly emergency cases." (Ohio)

"If ambulance service is not available in an area, we would recommend this service be made available through the fire department. If the firemen will take upon themselves the great responsibility." (Ore.)

"On condition they have ample manpower." (Several respondents. One or two also added "24-hour-a-day service")

"The operation of an ambulance service is a costly undertaking and unless you have the finances to do the job properly and keep your equipment modernized, one is foolish to enter into it." (Pa.)

"Provided it is started with good intent." (N. Y.)

Of those who dissented, only two advanced their reasons, as follows:

"I think ambulance service should be independent (of the fire department) but that is only one man's opinion. We have three ambulances, all radio equipped, and work with the police department. Some of our men are members of the local fire department." (N. J.)

"Only rescue and first aid" (should be operated by fire department). (N. J.)

One interesting recommendation offered by a New Jersey Squad was that women be included on the ambulance personnel. *"We find times when this is an asset, particularly when caring for women victims"* is the way the head of this unit puts it. Incidentally this Squad has five women

members, one on duty at all times.

Several other respondents emphasized the advantages of having properly trained women ambulance attendants, and women's auxiliary corps.

Back-Drafts Jeopardize Winston-Salem Firemen

Six business establishments were wrecked, with loss exceeding $100,000, in a spectacular fire that destroyed the two-story Roediger Building, 114-116 West Fourth St., in Winston-Salem, N. C., on April 11, last.

Almost the entire Winston-Salem Fire Department fought the blaze for three hours before bringing it under control. In this fire fighters were aided by a heavy party wall that prevented extension into other structures in the downtown area of the city.

The fire, starting from an undetermined cause, occurred at 4:10 p.m., and was answered by some 50 firemen of six companies. The businesses wiped out included a bake shop, chinaware store, electric service company office on the first floor; a portrait studio, a beauty shop and tailor shop on the second floor.

All the businesses were closed for the Easter Monday holiday at the time of the fire, and the blaze had made good headway before being discovered. It is believed to have started between the floors separating the bake shop from the studio.

Explosions Endanger Firemen

Two sharp explosions occurred during the early stages of the fire, caused, doubtless, by ignition of pent-up heat and gases (see cover illustration). Flames burst from seven second-story windows to shower glass on firemen in Fourth St. One fireman, operating a pumper in the street, was cut on the leg, and the window in the vehicle was shattered by the blast. The aerial ladder was dented by debris hurled onto it. One fireman on the aerial ladder who, at the time of the explosion, was preparing to break out windows, escaped serious injury. He was singed by the heat but not blown from the ladder. A power company lineman, on another ladder at the time of the explosion, was threatened by flames but firemen held a stream of water on him until he could reach safety.

The complete involvement of the building prevented inside fire fighting and operations were limited to exterior attack. Firemen used five lines on the Fourth St. side and four in the rear on Third St., stretching through a narrow alley. One line was taken to the roof of a Third St. building, while a heavy stream was directed into the fire and to cover exposures from the aerial ladder. A three-foot thick fire wall prevented extension from the bake shop to an adjoining structure no the east, while another heavy fire wall protected occupancies to the west.

During the course of this fire, two other blazes called firemen. One at 5:48 p.m. was responded to by one company. This was for a smoke scare at 408 West Twelfth St. The other, at 6:32 p.m., was for a fire in a frame upholstery shop at 1516 South Hawthorne Rd. Two pieces of apparatus responded and soon brought this fire under control.

Operations at the main fire were directed by Fire Chief E. M. Dixon.

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The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

TRAINING FIRE APPARATUS DRIVERS

THE discussion in this Round Table is a continuation of that which appeared in the March, April and May issues on training fire apparatus drivers.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the July issue as well.

Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Subject

Edward J. Blohm, Chief, Detroit, Mich.: All drivers are trained prior to assignment as drivers.

Standard training courses have been established for prospective drivers. A seniority list of applicants is maintained and those applying for the position (which pays slightly more) are subjected to the training course prior to acceptance. The course consists of two phases, i.e.:

(Phase I)—Six weeks—6 hours 5 days per week: Instructions on driving, traffic, tillering, handling of aerial ladders, equipment and operation of booster pumps and chemical tanks.

(Phase II)—Six to eight weeks—6 hours per day and 5 days per week: Complete instructions on all phases of pump operations, evolutions, etc.

Examinations are conducted at the conclusion of the courses and if the candidate passes satisfactorily, he is then certified as a driver. The member is then detailed as acting driver on occasion until a vacancy occurs for a "fire-fighter driver."

Following appointment as a "fire-fighter driver," such members attend the Training School periodically and are examined during the attendance of their company at company evaluations.

Appointments of "fire engine operators" are taken from the seniority list of "fire-fighter drivers" which they may accept, or, not accepting and wishing to wait for appointment to sergeancy, must then give up their driver classification and return to their former position as a confirmed fire fighter.

James T. Blamey, Chief, Spokane, Wash.: All members of the station are trained to handle their own apparatus. They are trained in pump operations at the drill tower. They are allowed to drive back from fires in order to familiarize themselves with the handling of the rig in traffic.

Time required depends upon the background and the ability of the men themselves. The officer in charge of the apparatus keeps a close check on all drivers under his command.

R. E. Paré, Chief, Montreal, Que.: Before members are assigned to drive apparatus, they must first of all be licensed operators. In addition, they are given special training in the operation of fire department vehicles.

They are then assigned as second drivers, driving back from fires, acting as replacement drivers, etc. etc. until appointed first driver of an apparatus.

They are given general instruction in handling the heavy apparatus through traffic; braking, turning, backing, etc., instruction in traffic laws and safe driving practices; instruction in fire department rules governing driving; taking a hydrant; spotting aerial ladders and spotting pumpers for drafting, etc. etc.

Approximately one week, or, 40 hours of training, is given drivers.

All drivers are required to be physically fit. Tests include eye examination, reflex test and general safe driving tests. Chief Mechanic is responsible for all tests and acceptance of drivers.

Elmer M. Cain, Chief, Cleveland, Ohio: Members of our department assigned as drivers of apparatus do receive special training to qualify them. They are selected from the companies by the captains, who select men that they think are best qualified by either previous experience as drivers or from observation, to use good judgment in any emergency that may arise while the apparatus is in operation. Special training is given them by the officers, the Superintendent of Apparatus and Equipment and at the Drill School.

Special training consists of proper

HERE ARE THE QUESTIONS

1. **Do members of your fire department to be assigned as drivers of apparatus receive special training to qualify them?**
2. **Of what does this special training consist?**
3. **What is the average time required to train a driver?**
4. **After they have completed the required period of training, are they subjected to further tests to determine their fitness? If so, of what do the tests consist?**
5. **If no special training is given drivers, how are drivers selected?**

driving and handling of the apparatus in traffic while responding to and returning from alarms. The new drivers are given their first driving experience by driving when returning from alarms.

Drivers are all trained in the proper methods of starting and stopping the apparatus in good and bad weather. Drivers of pumpers are usually pump operators and are instructed in properly placing the pumper for either drafting water or conecting to a fire hydrant. Drivers of ladder trucks are instructed in properly placing the truck for using the aerial ladder, if needed and use of the hydraulic raising mechanism.

The time required for the training of a driver depends a great deal upon the individual. Some men can learn and adjust themselves to conditions much more quickly than others; they learn faster and will overcome any nervousness they may have. If they are assigned to a company that responds to a large number of alarms, they get the benefit of that additional practical experience.

After the members are assigned as drivers, their performance is watched at the drill school each time they attend, and also noted at the training periods at company quarters. Where necessary, they are given additional instructions, which consist of everything necessary for the operation of the apparatus.

R. E. Malmquist, Chief, Minneapolis, Minn.: Prospective drivers receive special training twice each year during regular drivers' school, during the summer with their companies, and are given actual driver experience while company is returning from an alarm.

This special training consists of instruction given by the Master Mechanic and the Fire College, in the proper operation of the different types of pumps used in our department, operation of aerial ladders, care and maintenance of all apparatus, and instruction in driving safety.

It usually takes one year of training before a driver is allowed to drive apparatus to a fire.

Twice each year all regular drivers and change drivers report to the Fire College for special training in Accident Prevention, proper operation and maintenance of all types of motor equipment and company organization at fires.

In addition, all drivers and prospective drivers report at the Fire College with their companies during the summer months for training in actual fire fighting procedures. Drivers are marked as to their ability at this annual inspection.

Walter J. Adams, Chief, Rochester, N. Y.: Drivers of apparatus are picked according to qualifications, but we are very much concerned with getting the best possible personnel in the Bureau as drivers.

On the job training is given to second drivers and other members of the company by allowing them to drive apparatus back to quarters in returning from alarms of fire.

Each company within the Bureau has several members who are capable of driving and operating pumps.

When new members are appointed to the Bureau, their personnel records are closely studied and any such members who have previously been operating trucks etc., are then trained as

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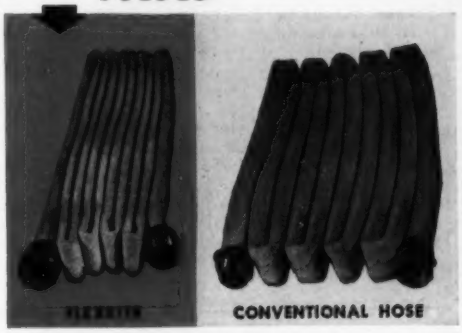

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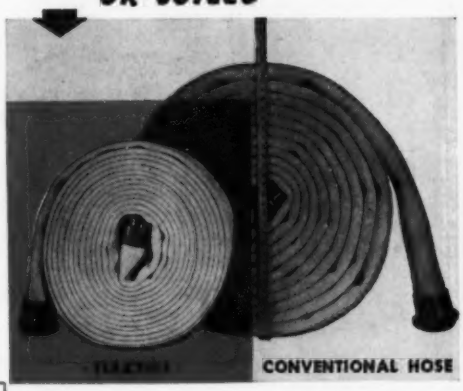

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drivers. Also Deputy Chief in charge of apparatus pays particular attention to operators of apparatus, and, if he considers any member is not a good driver, through his recommendations, said member is relieved from the duties of driving.

Forrest B. Lucas, Chief, Dayton, Ohio: In 1952 all captains of the department and personnel of Training School received a 40-hour preparatory course for teachers in Driver's Education from AAA instructor, Amos E. Neyhart. This course was given all company officers by the Division of Fire Training School in 1954. All members of the Division received a Driver's Education course and psycho-physical tests. These tests are now a part of the probationary training program. Company officers instruct and supervise practice driving of their company personnel.

The average time required to train a driver depends upon previous experience and ability to master good driving fundamentals, and develop skill (Average 60 hours).

Road tests in the company of Superintendent of Vehicles are graded on knowledge of mechanical operation and skill. Company officers are examined as to their knowledge of city ordinances and state laws.

A standard AAA skill course for trucks will be completed early this year, and will be used to determine skill.

Sylvester E. Jennings, Chief, Bridgeport, Conn.: Drivers are chosen by selecting men with driving experience in civilian life, if possible. They are then trained to drive apparatus under direction of our Maintenance Crew. No specified time is allowed; Master Mechanic determines when man is qualified. First drivers are assigned to driving apparatus on return from fires, then assigned as regular full time drivers.

Terence Mulligan, Chief, Sacramento, Cal.: Men are screened and selected as soon as they come into department. They are given a 30-day period of training through the Training Division, and then turned over to a company under the supervision of the captain in charge, who in turn, turns in a report to Headquarters. The man carrying the highest credit is placed first on the list. A list of eligible drivers is then listed for future use.

The course consists of rules and regulations governing the operation of fire apparatus as set forth by city and state; aptitude and skill in handling fire apparatus in heavy traffic and ability to maneuver apparatus under trying conditions.

The average time required to train a driver is thirty days.

All men that pass the test are given the opportunity to drive apparatus when the occasion arises.

Allie A. Feldman, Chief, Denver, Colo.: We attempt to train every member on each piece of apparatus as a driver. This is done over a period of many months by having them drive in every instance except going to fires. After the company officer determines their fitness, he then assigns them as extra drivers. If, in his opinion, the driver cannot apply himself successfully to his assignment, he is eliminated from further training.

In the case of engineers, they are required to pass all civil service examinations, a part of which covers driving. Here they must demonstrate their ability to handle the equipment under all conditions.

C. D. Sirmon, Chief, Mobile, Ala.: At the present time the City Commissioners have recommended that fire department drivers be classified by the Mobile County Civil Service Board, and the Civil Service Director is working on this plan.

We do train fire apparatus drivers. Each driver must have a state driver's license. He is given an actual driving test on the apparatus by the assistant chief and drillmaster, as well as an actual pumping test from draft, raising aerial ladders and tillering on aerial ladder trucks. He is given an oral examination on simplified hydraulics and care for trucks, location of streets, etc. After passing these tests, a letter is written by the assistant chief and drillmaster to the Chief of Department, certifying the driver's ability if satisfactory; otherwise he is turned down as a driver. In almost all cases, promotions are given to the grade of driver on the basis of seniority.

About ninety days training is required.

Further instruction and practice are given on specific apparatus the driver is assigned to drive.

Thomas Maloney, Chief, Jersey City, N. J.: Appointees who are licensed drivers, are given a course in pump operation and vehicle operation at the Department Training School for the various types of pumpers in use in the department. The course includes laying hose, suction operation, hydrant operation, rudimentary hydraulics and

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relay, as well as care and maintenance of the apparatus. Men who are assigned to double companies (pumper and truck) also receive instruction on tillering and truck operation. The driver is given two days training on each make of apparatus, i.e., two days on Ward-LaFrance pumpers; two days on American-LaFrance pumpers; two days on Seagrave pumpers, etc.

Tests consist of performance of selected duties under simulated fire conditions supervised by members of the Repair Shop and Training School personnel. Successful performance results in qualification, which becomes a permanent entry on the trainee's service record.

After qualification, generally speaking, the chauffeurs rotate in driving duties on return to their companies. There is no premium pay for driving duty in this department.

Training is given some time during the first year after appointment. Considerable pre-training knowledge may be assumed due to house association.

Clifton J. Baals, Chief, Fort Wayne, Ind.: Our Master Mechanic, or his assistant, has charge of driver training. Drivers are first taught in class why engines should not be started except for fire runs or training. They are taught the proper use of the choke, the necessity of knowing how to shift gears and what happens in the relation to engine speeds and rear wheels when doing same; to know how and to use double clutching and last, the importance of keeping fire apparatus under control at all times. After this instruction, drivers go through practical experience on the street.

Usually it takes six hours driving in two-hour courses with someone who has had previous driving experience, to train a driver.

No further tests are required unless the officers in charge or the individual member requests it.

Frank H. Burns, Chief, Grand Rapids, Mich.: A written examination and a rigid driver's test are given prospective fire apparatus drivers. They are periodically tested for reaction, reflexes, field vision, color, distance, visual acuity, etc., on a special device for that purpose.

We do not actually train drivers, rather we choose men who are able to qualify.

A driver in our department holds a rank and receives a higher rate of pay. He must qualify for his position through civil service the same as for promotion to any other rank.

Harry J. Sommers, Chief Engineer, Newark, N. J.: All drivers of all types and kinds of fire apparatus or vehicles, receive special training in driving by a Captain assigned as Inspector of Apparatus and Instructor of Chauffeurs.

The training for pump operators consists of: Proper pump operations while connected to hydrants; while at suction; operations with booster lines and small streams, and basic practical hydraulics.

Hose wagon drivers receive instruction in the proper operation of pumps to supply small streams of booster lines and the proper placing of wagon for use of deck nozzles and heavy stream appliances.

Hook and ladder drivers receive, aside from regular driving instructions, extensive training in the proper handling of whatever type of aerial ladder they may be assigned to; proper spot-

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- CELLAR
- CHEMICAL OR BOOSTER SHUT-OFF

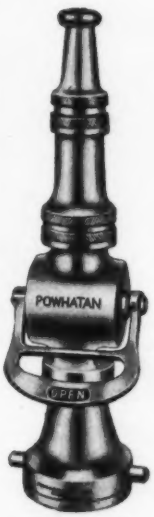

PLATE 101-A
SHUT-OFF

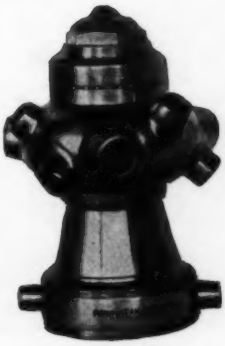

PLATE 104
CELLAR

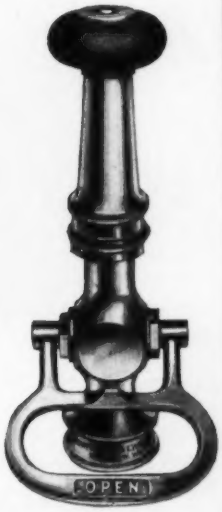

PLATE 112
CHEMICAL OR BOOSTER

[IF YOU DO NOT HAVE ONE, SEND FOR OUR NEW CATALOG "A" TO-DAY.]

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

MASTER PORTABLE ELECTRIC POWER

helps you in any emergency

One man easily handles this *lightweight* engine-generator in any emergency . . . has it running in *seconds*. 4-cycle gasoline engine drives the 1500 watt generator. Two 115 volt outlets for plugging in electric saws, drills, suction fans, and floodlights. Carry it in the trunk or equipment compartment of your emergency vehicles. It will help you save lives and reduce property damage. Ideal for civil defense. Write for details on DC (97 lbs.) or AC (107 lbs.) models. Other sizes available.

MASTER VIBRATOR COMPANY
238 Stanley Avenue, Dayton 1, Ohio

THE MOST EFFECTIVE
TOOL IN
FIRE SERVICE

FROM PERMANENT TO PORTABLE
IN A FEW SECONDS. . .

HERE is the most perfectly engineered and constructed gun you can find in fire service. Used everywhere, it delivers an exceptionally solid, far-reaching stream. Stream can be moved in any direction and locked as needed. Comes complete with brackets for mounting or carrying and—three tips of varying sizes. . . .

ting and placing of truck at fires, the proper use of both stationary and portable ladder pipes. In this phase of training, we particularly stress the rapid maneuvering of aerial ladder from point to point for rescue purposes.

The average time required to train drivers varies according to the amount of previous experience the man may have had before entering the Department, and also upon his ability to assimilate the instructions given. However, the average time, according to the records of this Department, is from two weeks to one month of training.

Drivers are subjected to further tests to determine their fitness. These consist of primarily, the same training that they received while learning to operate the apparatus. The Inspector of Apparatus attends drill periods of both engine and ladder companies to supervise the proper operation of same.

All drivers receive special training. None is permitted to drive unless he has a N. J. State Drivers License, passed the training course as prescribed, and is approved by the Department Physician.

S. H. Edmondson, Chief, Pasadena, Cal.: We do give special training to men assigned as drivers of fire apparatus.

First, I might say that a man is not qualified to take an engineer's (driver's) examination until he has been on the department four years. If he is interested, his training consists of practical pump operations weekly by the captain (who must have been an engineer before advancement) and a regular engineer, plus weekly drills and study of fire department hydraulics and geography of this city. As these men progress, they are given driving experience returning from fires and eventually as relief drivers. In addition to the above training, all members are notified when pumps are being tested at our test pit by the master mechanic and all who are interested, may receive instruction by the master mechanic on pumping and drafting.

One to two years is the average time required to training a driver.

After completing the course of training they are given further tests. These tests consist of a written test on the mechanical parts of the pump and hydraulics, geography of the city and ordinances and rules and regulations pertaining to drivers; a driving test; a practical test on pump operation and finally, an oral interview. The men are then put on an eligibility list and the Chief of Department may choose from the first three on the list.

Joseph Waterman, Chief, Toronto, Ont.: We do give apparatus drivers training in driving and operation of pumpers and aerials.

All members of the fire fighting staff must have a chauffeur's license and every man is a driver. When new recruits join the department they are given one month's training which consists of all phases of fire fighting. One week is given to driving and operating of pumps and aerials.

No further tests are given, but the captain in charge of the section reports to the office if the driver is not working out satisfactorily.

When they are assigned to their section, they drive the truck back from fires until the captain in charge is satisfied that they are qualified to be drivers.

What's Burning

THE following list includes fires of $10,000 and over in the United States and Canada for the month of May, 1955.

Month Ending May 31, 1955

Florence, Ala.—W. B. Sommons & Co. wholesale produce warehouse destroyed.
Lodi, Cal.—Heggblade-Marguleas packing shed and Lakeshore Fruit Co. building destroyed.
Los Angeles, Cal.—Large market damaged.
Los Angeles, Cal.—Albert Lee Ceramics Co. plant destroyed.
Santa Monica, Cal.—Warehouse and small hotel at 1435 Second street, destroyed.
San Francisco, Cal.—Two flats, 6264 Rogers street and adjoining warehouse of National Envelope Co. and Western Movie Supply Co. destroyed.
South San Francisco, Cal.—California Golf & Country Clubhouse damaged.
Glenwood Springs, Colo.—Troy Laundry and Dry Cleaners damaged.
Hartford, Conn.—Wethersfield Lumber Co. yards damaged.
Norwalk, Conn.—Foam Rubber Products Co. plant destroyed.
Stratford, Conn.—Jatina Mfg. Co.'s factory, makers of caps for cap pistols, damaged.
Waterbury, Conn.—Walsh Elementary School destroyed.
Wilmington, Del.—Westinghouse Electric Co. warehouse and City Cab Co. garage damaged.
Delray Beach, Fla.—Webb Block building occupied by jewelry store, Western Auto Supply store, electrical appliance shop, laundermat and shoe repair shop destroyed.
Sandpoint, Ida.—Trestle Creek Inn garage destroyed.
Champaign, Ill.—Hays Plumbing and Heating Co., spread to Dana Hudelson Auto Co. and Brunkow Electric Co. buildings, damaged.
Gary, Ind.—Ferguson & Day Transfer Co. warehouse destroyed.
Cedar Rapids, Ia.—Building housing Todd's O.K. Drive-In destroyed.
Spencer, Ia.—Building housing Bjornstad drugstore destroyed; adioining buildings damaged.
Paducah, Ky.—John Green Department Store in downtown destroyed.
Bridgewater, Me.—Farber Brothers Supply Company mill destroyed.
Columbia Falls, Me.—Domestic Peat Company's processing mill and storage shed destroyed.
East Madison, Me.—Barn, livestock and farm machinery and residence of Otis DeMerchan destroyed.
Newburgh, Me.—Three homes occupied by Oral Morse, Henry W. Rines and Barrett Gordon and a barn, destroyed.
Lowell, Mass.—Cole's Inn destroyed.
Mansfield, Mass.—Mansfield Municipal Airport hangar damaged.
Ann Arbor, Mich.—Michigan Liquor Control Commission's state retail store damaged.
Grandville, Mich.—United Metal Finishers Co. plant on Highway M-21 destroyed.
Ironwood, Mich.—F. J. Hager Lumber Co. yard, Laird Lumber Co. and adjacent Peare Furniture Co., damaged. Incendiary.
Traverse City, Mich.—Wilson Furniture Co. building destroyed.
Minneapolis, Minn.—W. S. Nott annex used as a warehouse destroyed; rubber products firm, Lee Overall Co., Fur-Tex building, Meyer's butcher equipment firm, damaged.
Stillwater, Minn.—Old World War I munitions plant used in recent years as storage space for window frames by Anderson Corp., destroyed.
Worthington, Minn.—Anderson Greenhouse destroyed.
Kansas City, Mo.—Justrite supermarket destroyed.
Blairstown, N. J.—First Methodist Church destroyed. Electric clock.
Browns Mills, N. J.—Four dwellings, Ridge road; four dwellings, Vance avenue; three dwellings, Bishop road and dwelling on Press road, destroyed. Forest fire.
Freehold, N. J.—Round House Auction Market on Route 79 damaged.
Kenilworth, N. J.—Warehouse of George Woloch Products Corp. destroyed.
Mt. Holly, N. J.—Building of Modern Packaging Co. destroyed.
North Branch, N. J.—Barn at Silver Saddle Ranch destroyed.
Perth Amboy, N. J.—The O. K. Electrical Co. and adjoining buildings damaged.
Ridgewood, N. J.—Chestnut avenue business and storage facilities of nine firms, off main shopping district, damaged.
River Edge, N. J.—Fellowship hall of First Congregational Church destroyed.

No lubrication necessary
Carbon bearings (oilless)
2 Piston-finished stainless steel shafts
Bronze housing (Oberdorfer alloy No. 741)
Bronze spur gears (Oberdorfer alloy No. 16438)

the new
OBERDORFER
BRONZE BOOSTER PUMPS

These booster pumps with oilless bearings will last 3 to 5 times longer than the old style equipped with plain bronze bearings. As a result of closer machining tolerances, over 20 feet of suction lift may be depended on.

The No. 13 and No. 26 Oberdorfer Pumps are more fool-proof than they have ever been. When you get to a fire you have something you can count on. It isn't necessary to wear pumps out checking them periodically to see if they will work. These pumps are metering pumps in principle and therefore must produce the same volume for every revolution of the drive shaft.

PERFORMANCE DATA—No. 26 and No. 13 PUMPS

Pump No.	Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
26	1600	120	500'—1½"	20'	150
13	1600	120	500'—1½"	20'	75

FIRE PUMP DIVISION, Oberdorfer Foundries, Inc., Syracuse, N. Y.

identify Firefly REFLECTIVE License Plate Signs protect

see your dealer or write

PACIFIC REFLEX SIGNS
BOX 323 McMINNVILLE, OREGON

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GREATEST NAME IN

BADGES

SERVING THE FIRE FIELD

Since 1879

Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

Write for latest catalog and price list.

Dealer inquiries invited.

THE C. G. BRAXMAR CO., Inc.

JOHN O. VEIT, *President* — JOHN O. VEIT, JR., *Secretary-Treasurer*

216 E. 45th Street, New York 17, N. Y.

Union City, N. J.—Minna hat shop destroyed and several stores and offices damaged.
West Trenton, N. J.—Sure Way Market damaged. Overheated refrigerator motor.
Albany, N. Y.—Six hundred tons of stock paper in yard of APW Products Co. destroyed.
Astoria, N. Y.—Two stores, including dress shop owned by Joseph Saler, destroyed.
Hudson, N. Y.—First Reformed Church of Hudson damaged.
Mechanicsville, N. Y.—Acid plant of West Virginia Pulp and Paper Co. mill destroyed. Acetylene torch.
Syracuse, N. Y.—Clay cannery owned by J. J. Weller Co. destroyed.
Utica, N. Y.—Building housing Dinner Bell Restaurant, dental laboratory, dress shop, pharmacy and apartments, damaged.
Charlotte, N. C.—Building occupied by Sharen Bakery and Charlotte Boys Towne Shop, damaged. Oven explosion.
Gibsonville, N. C.—City Cafe, Patterson's Food Store, Blue Bird Inn and Wicker's Warehouse damaged. Grease ignited on grill in cafe.
High Point, N. C.—Southern Plywood Co. destroyed.
Akron, Ohio—Rudick's Jewelry Inc. damaged; Wilbur-Rogers, Inc., women's wear, damaged; Holiday Shoe Store damaged and Robinson's Apparel damaged.
Amsterdam, Ohio—Mullen Hotel, building occupied by hardware store with apartment above and Odd Fellows Hall, damaged.
Canton, Ohio—Harvey Loehr Lumber Co. in Crystal Park section destroyed.
Cleveland, Ohio—Our Lady of Lourdes Church Catholic School damaged. Short circuit.
Cleveland, Ohio—Euclid High School damaged. Boiler exploded.
Hudson, Ohio—Hudson Fireworks Display Co., 15 buildings on tract at Route 91 and Hudson drive damaged. Possibly arson or vandals.
Kinsman, Ohio—Building occupied by Kinsman Electric Shop and store room of Saulters Furniture Store destroyed.
Oregon City, Ore.—Titan Powder Co. plant damaged. Explosion.
Portland, Ore.—Kay Mattress Mfg. Co. destroyed.
Allentown, Pa.—Hess Bros. department store warehouse destroyed.
Allentown, Pa.—Midway Theatre building damaged.
Berwick, Pa.—Wise Potato Chip Co. plant damaged.
Columbia, Pa.—Keystone Cap Co. plant damaged. Lightning.
Dauphin, Pa.—Lumber yard and sawmill, Dauphin R. D., six miles northeast, destroyed.
Mahanoy City, Pa.—Eight dwellings occupied by William Richelderfer, Clayton Smith, David Burnham John Brady, Miss Mary Annstock, Robert Fisher, Eugene Wickey and Purcell Romiak, damaged.
Philadelphia, Pa.—Denaturing plant of Publicker Industries, Inc., distillery destroyed. Explosion.
Pittsburgh, Pa.—Homewood car barn, five miles from midtown, destroyed.
Warwick, R. I.—Buildings housing House of Eve Ceramics, Harrop's Bootery and Elmhurst Cleaners, damaged.
Lake City, S. C.—Moore Trading & Lumber Co. destroyed.
Walterboro, S. C.—Pine Grove Baptist Church No. 1, eight miles out, destroyed.
Knoxville, Tenn.—O. B. Wise machinery plant and iron works damaged.
Lamesa, Tex.—Lamesa Meat Co. plant destroyed.
Wichita Falls, Tex.—Building on Highway 82, housing a boot shop, barber shop, cafe, bar, loan company, liquor store, cleaners and finance company destroyed.
Salt Lake City, Utah—Dewey's Circus Bar destroyed.
Front Royal, Va.—American Viscose Corp.'s spinning department damaged.
Richmond, Va.—Philip Levy's Co.'s furniture warehouse destroyed.
Richmond, Va.—Southern Spring Bed Co. warehouse damaged.
Bellingham, Wash.—Catholic Grade School damaged.
Kennewick, Wash.—Three Metz Marima power boats of Dale Metz, destroyed.
Marysville, Wash.—A. F. Wiser Lumber mill damaged; Great Northern Railway bridge damaged.
Pasco, Wash.—Airway ballroom destroyed. Cigarette.
Raymond, Wash.—Twenty-unit Rainier Apartments destroyed. Faulty chimney.
Seattle, Wash.—Rainier Heat and Power plant destroyed; Publix Hotel damaged. Faulty boiler.
Kenosha, Wis.—Two barns on Nate Ladenson farm destroyed. Faulty wiring.
Mount Sterling, Wis.—Feed mill and seed warehouse of Tillman Olson destroyed. Lightning.
Whitewater, Wis.—Barn on James E. Anderson farm, six miles north, destroyed Defective wiring.
Kitchener, Ont.—Chicken Nest Restaurant damaged.
Kitchener, Ont.—Granite Club destroyed.

IT'S NEW!

CIRCUL-AIR

A—Z

FIRE HOSE WASHER

The new, inexpensive A-Z Hose Washer drains and rinses the hose as it washes. 4 Roto-jets constantly spray hose with clean, fresh water—all sediment is flushed through collecting pan and down the drain. Semi-automatic, the A-Z is operated by just one man. No strain. No fatigue. Turn tables keep the hose OFF the floor. They're excellent for re-loading truck (several lengths may be stacked on each) or loading the hose dryer.

CIRCUL-AIR

FIRE HOSE DRYER

LABORATORIES APPROVED

The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life! No other drying method is so fast—so economical—so easy to use.

WRITE FOR CATALOG

THE CIRCUL-AIR CORPORATION
575 East Milwaukee, Detroit 2, Mich.

Brooklyn Fire

(*Continued from page* 517)

and 235 were called to plug gaps in the attack. At 10:53, upon receipt of a third alarm from the fire scene, the Dispatcher sounded a fifth alarm, and ordered these relocations: Eng. 311 to 290; 281 to 222; 240 to 235; 237 to 218; Ladder 147 to 111 and 123 to 112.

Combined forces at the Greenpoint fire included 40 pumpers, of which Brooklyn sent 18, Manhattan 13 and Queens 9; two Rescue Units; 6 ladders and 4 Battalion Chiefs. Locating units included 22 engines and 4 ladder companies,—10 pumpers in Brooklyn, 7 in Manhattan and 4 in Queens; also 4 ladders in Brooklyn. Sixty-one firemen were treated for injuries at this fire alone.

The Brooklyn Fire Alarm Headquarters was in charge of Chief Dispatcher John Jordon.

Another sidelight on the complications at this fire was the difficulties encountered by the fireboat flotilla. The Mitchel (Eng. 232); Hewitt (77), and McKean (57) headed up Newtown Creek, directed by Marine Batt. Chief Monahan in the F. D. tender "Smoke." Three highway bridges had to be opened for the armada. While it was en route, Supervising Dispatcher Julius Feldman, in the Manhattan Fire Alarm Headquarters, notified Chief Loftus via radio that the Fire Chief of Jersey City needed a Fireboat to check a wide area blaze which land company units could not reach. Chief Loftus authorized dispatch of the Fireboat Harvey, then at the Battery covering the McKean's berth, to proceed to Jersey City.

The boats all encountered shallow water in the Creek, and faced the possibility of fouling their pumps, should they attempt to supply hose lines. Recognizing the hazard, and realizing that the City itself without these boats was down to only three boats, Chief Loftus ordered the three to return from the creek. The Hewitt was ordered to the Battery in the McKean's place, and the McKean to the Harvey's berth at West 13th st. En route down the East River, the "fleet" received a call for help, requesting any boat in the vicinity of the Williamsburg Bridge to assist in locating a "man overboard," north of the bridge. The 50-year-old Hewitt was turned about, but was beaten to the spot by the Coast Guard and Police.

Trash-Burning Sets Off Furniture Store Fire

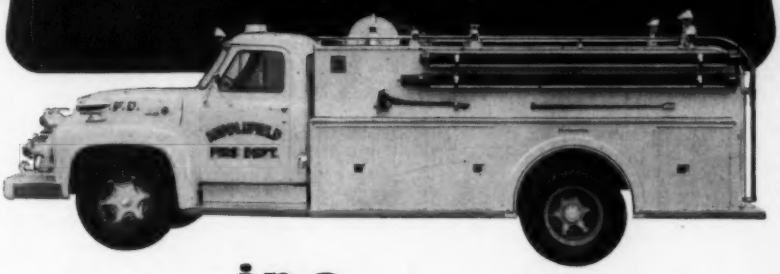
A new wrinkle to the old story of a new building being destroyed by fire while the structure it replaced still stands, was added recently in Los Angeles.

An annex to the Union Furniture Mart, 11035 San Fernando Rd., had just been finished and a worker was burning scrap pieces of lumber left over by the construction job. Although he was properly attending the rubbish fire with a hose, sparks set fire—not to the annex—but to the main building of the store.

The annex was spared but flames caused $65,000 damage to the store, including $50,000 inventory loss. Assistant Chief Marvin Meador of the L.A.F.D. directed 11 fire companies which fought the two-alarm blaze for 45 minutes.

PAUL DITZEL

You **CAN** take it with you . . . . .



. . . . . in a

SHARPSVILLE CHALLENGER TANKER

THE fire-fighting profession and those of us who are privileged to serve it, have greatly improved techniques and equipment used to apply water to a fire. Yet, these advances are of no avail if water, the essential ingredient, is missing.

A Sharpsville Tanker will help you fight fires better . . . may mean the difference between success or failure. In business for almost one hundred years, Sharpsville has built tank trucks of every capacity and description.

Sharpsville
STEEL FABRICATORS, Inc.
Sharpsville, Pa.
Established 1855 Incorporated 1917

Builders of Service, Crash & Ladder Trucks • Volume & High Pressure Pumpers • Squad & Emergency Cars • Storage Tanks

WATER when and where you want it!

with **HARODIKES**
Portable Canvas Water Tanks
THE ECONOMICAL AND EFFICIENT WAY TO CARRY AND STORE WATER.

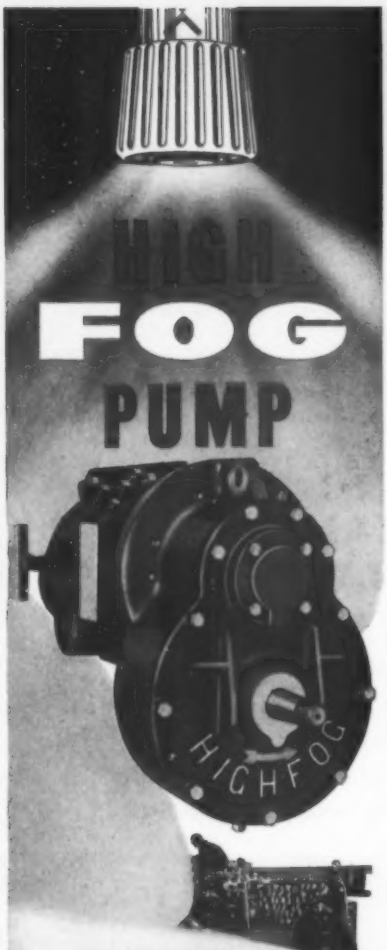
ON THE JOB - ON THE SPOT
KEEPING AMERICA GREEN

EXCLUSIVE FEATURES
- Self Supporting
- Easily Back-packed
- Ideal for Relay Pumping
- Easily Transported

Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE

Write TODAY for Full Information and Price List
HARODIKES INCORPORATED
NORTH DIGHTON, MASSACHUSETTS



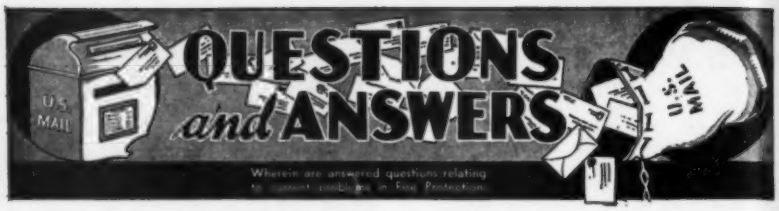
- WEIGHS ONLY 210 POUNDS
- 28" OVERALL LENGTH
- UP TO 1000 PSI WITH DELIVERY FROM 100 GPM—55 GPM
- EASILY ADAPTABLE TO ANY APPARATUS

The versatility and efficiency of the High Fog Pump is the right combination for ALL fire equipment. Capable of delivering pressures to 1000 PSI with water delivery from 100 GPM to 55 GPM, the High Fog Pump installs easily on existing equipment or new apparatus. Power take-off is made from the transmission with opposite-engine or engine rotation available.

For complete specifications write the manufacturer.

afec

ASSOCIATED FIRE EQUIPMENT CO.
1915 S. SAN PEDRO ST., LOS ANGELES, CALIFORNIA



Wherein are answered questions relating to current problems in Fire Protection

Capacities of Suction Connections

To the Editor:

Is it possible to obtain a greater volume of water from a hydrant by using two 2½-inch lines from separate butts than from a single 2½-inch butt, using a 2½ to 4½-inch hydrant swivel, 4½-inch suction hose to pumper?

J. B.

Answer: The friction loss in 10 feet of suction hose, 4½-inch diameter, carrying, for example, 300 gallons per minute, is 0.11 pounds aproximately.

The friction loss in two parallel lines of 2½-inch hose carrying between them the same quantity of water, is 0.6 pounds per 10-foot length.

The saving in friction loss of the 4½-inch line over two parallel 2½-inch lines for a total discharge of 300 gallons per minute is .60–.11, or 0.49 pounds.

The pressure to discharge 300 gallons of water per minute from a 2½-inch hydrant outlet, secured by use of the discharge formula with the coefficient of .9, totals .36 pounds.

Thus there is a saving of .49–.36, or .13 pounds by using the 4½-inch suction hose with an increaser, over two parallel 2½-inch lines.

For all practical purposes this saving is negligible. As a matter of fact, other factors which might enter into the connections may either increase or reduce this differential.

In reality, a difference of .13 pounds in a fire stream means little or nothing in actual fire fighting operations.

Comparison of Carrying Capacity of Hose Lines

To the Editor:

In a recent promotional examination, the following question was asked: The carrying capacity of a 2½-inch hose line is 2, 3, 4, 5 or 6 times greater than that of 1½-inch hose.

I figured this problem by squaring the diameters and dividing the larger by the smaller. In solving the problem in this manner, the nearest answer I could get was 2.7.

Is this the correct answer?

F. S. D.

Answer: Comparing the capacity of two water carriers (hose lines or pipe lines) by comparison of their cross-sectional area is a very inaccurate process.

In "Fire Service Hydraulics" we do compare a hose line with a pipe line, but another factor enters into this comparison. Pipe lines vary very widely in their capacity depending upon the age and interior condition of the pipe. So a comparison of carrying capacities between hose and pipe lines, based upon the cross-sectional areas of the two carriers, while introducing an error, does not create an error greater than that which would be produced if, for example, the comparison was made by other means and involved a pipe line with a coefficient of, for example, .80.

One approximate way of comparing capacities of two different carriers is by finding the flow in each which gives the same friction loss.

The tables below gives the flows in 1½-inch hose and 2½-inch hose which creates the same friction loss. The ratio between the flows is also included.

You will notice the ratio varies from 3.2 to 3.84, which means that 2½-inch hose for the same friction loss would have from 3.2 to 3.84 times greater flow than 1½-inch hose.

Friction Loss 1½-Inch Hose (100 Feet)	Flow In 1½-Inch Hose (GPM)	Flow In 2½-Inch Hose For Same Friction Loss	Ratio (2½-Inch Over 1½-Inch)
6.1	40	149	3.7
9.3	50	190	3.8
13	60	225	3.76
17	70	260	3.73
22	80	305	3.8
27	90	340	3.78
33	100	376	3.76
39	110	415	3.76
47	120	460	3.84
55	130	500	3.84
63	140		
71	150		
80	160		
89	170		
100	180		
110	190		
121	200		

The above figures for friction loss in 2½-inch hose, up to and including 130 gallons per minute flow, were secured by dividing friction loss in 2½-inch linen hose by 2.1, as no tables are available giving friction loss in 2½-inch R.L. hose at very low flows.

Priming Pump

To the Editor:

A 750-gallon, 2-stage pumper is rated at 120 pounds in capacity gear. How can I get 120 pounds pressure. By opening my booster gate and putting water in pump to fill it and shutting off until it shows at discharge gates? In this way my pump is filled and all is shut off as the booster has no show here at all. Do I have to do some stretching of 2½-inch hose? I have a governor on this pump, but it is out of calibration.

N. V. B.

Answer: If the priming device on the pumper is in operating condition, it is not necessary to prime the pump by filling the pump and the suction hose.

On the other hand, if the primer is inoperative, then the task is more difficult. The pump and suction hose can be filled from the booster tank, but it

will necessitate the use of a foot valve on the suction hose. This foot valve permits water to enter into the suction hose from the end, but prevents water from flowing back out through the end of the suction hose.

The hose and pump should be filled until water is flowing out of the discharge of the pump. Then the pump is started, and the discharge valve opened (assuming it has been closed after the filling of the pump).

In order to determine the discharge from the pump, it is desirable to have a hose layout made. For 750 gallons per minute, two 50-foot sections of 2½-inch hose into a deluge set with proper size tip is necessary. The nozzle pressure on the deluge set, as well as the flow, can be changed by throttling the discharge of valves which feed the two lines.

For flow at "pressure," a single line of hose will be satisfactory.

Gated Siamese Connections

To the Editor:

We have a 3-way gated siamese—3 into 1 with 2½-inch connections all the way around—for our 3-inch hose for aerial nozzle which has 2½-inch couplings.

If this same gated siamese had clapper valves on it instead of gated valves, would it be possible to close one clapper valve, providing another pumper is pumping into the same siamese and is pumping at a higher pressure?

We are anticipating the purchase of a 2-way gated steamer connection siamese, that is two 2½-inch female gated into a 4½-inch female connection that fits on the pumper. Just what are the advantages of gated siamese that fit on the pumper over the same siamese with clapper valves

H. H.

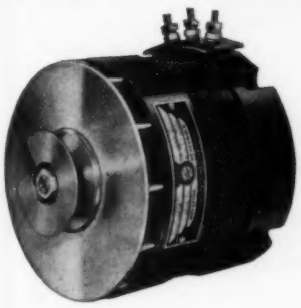
Answer: Under certain conditions, it would be possible to close one clapper valve in a siamese connection where greater pressure was provided on one of the lines feeding it. This is more likely to occur where the feed lines are short, than where they are long.

Where a two-way siamese connection is to be placed on the suction side of a pumper (two 2½ x 4½-inch), the gated, rather than clapper valve, type is preferred by many departments. Among the reasons commonly given for this choice is that in the event that it is necessary for any reason to use a hard suction hose on the siamese connection, for lifting water where a supply under pressure is not available, you would have to detach the other line of hose, and put a blind cap on the unused connection. Otherwise, as soon as a vacuum was created in the hard suction, the clapper valve would open of its own accord, and you would not be able to maintain a vacuum.

Other fire departments hold that the gated siamese is more positive in operation, for with manual control of the valve, there is no chance of the automatically closing clapper valve sticking.

For AMPLE Electric Power . . .

Leece-Neville ALTERNATORS



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CHARGING CURRENT WITH ENGINE IDLING At the fire, L-N Alternators produce up to 40 amps with engine idling, keep batteries "up", permit use of 2-way radio.

110 VOLT CURRENT L-N Transformer gives up to 1200 watts at 110 volts . . . current for flood lights, half-inch drill, power saw.

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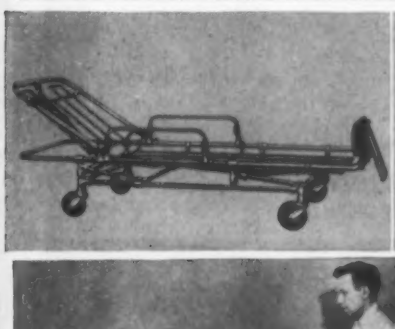

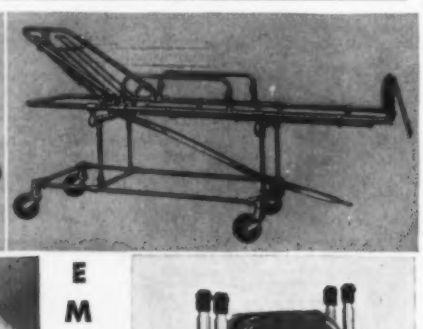

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World Wide Fire News

By Rei B. Woolley

Can You Give Away Boots? Ask 'Em in Giessen

The burning of some 8,000 pairs of rubber boots in Giessen, Germany, on March 8 last caused a stink—literally and politically.

According to West German papers, 25,000 pairs of the boots were being burned because their American owner "couldn't give them away" to needy Germans without paying a German tax.

The businessman, one David Nutkys, had bought 75,000 pairs of surplus Army rubber boots which were running up storage charges. He was quoted as saying he wanted to give about 25,000 unsalable pairs away free, but German customs insisted he would have to pay duty on each pair.

On March 5, 8,000 pairs went up in smoke—and what smoke! But the newspapers screamed "bureaucracy" and alarmed officials said customs authorities have been "too hasty and too duty-conscious."

The burning of the boots was halted pending reconsideration of the customs officials' decision.

Meanwhile the physical stench hung heavy over Giessen!

* * * * *

Peculiar to the Age We Live In

Here are two press items, abbreviated from the news of the day, which offer food for thought for those who are inclined to question what today's fire fighters are up against:

SOUTH BEND, Ind., March 31 (AP)—An explosion of liquid rocket fuel killed a University of Notre Dame assistant professor today after he had warned four students to run because "something is going wrong."

Dr. John Clement Treacy, 30 years old . . . and the four seniors, had retreated a considerable distance from the small cinder block building where the experiment was being conducted. Then the blast ripped through one wall of the structure. A small piece of metal struck Mr. Treacy in the neck with shrapnel impact and killed him instantly.

MORRISTOWN, N. J., April 1 (Sp. to N. Y. "Times")—An explosion of undetermined origin ripped through a laboratory at the Allied Chemical and Dye Company plant . . . this morning. One man was burned fatally and two others were injured.

Nicholas Zacharkiw, 39 years old, . . . a chemist, suffered fatal burns . . . two employes who were standing outside the building near the laboratory window, were hit by the blast, taken to the hospital, treated and released.

Mr. Zacharkiw was alone in the laboratory in the basement of the building. The others were outside the building attaching tanks for an experiment when the blast occurred. Property damage was extensive.

* * * * *

Scientists to Study Fallout

The National Academy of Science, it was reported in April, will make a far-reaching investigation into the "biological effects" of radioactive fallouts from atomic and hydrogen bombs.

The Academy, which draws on funds from the Rockefeller Foundation, will

make a "dispassionate and objective effort to clarify the issues which are of grave concern as well as great hope to mankind," according to the public press.

The investigation, it is said, will be aimed at clearing up wide differences of opinion as to whether continued use of atomic energy—especially in bomb form—could lead to an increase in the number of defective children born of future generations.

* * * * *

How About Carrier Pigeons?

While the southern part of the United States was doing its best to escape the hazards imposed by impaired fire alarm communications caused by struck telephone workers in many southern states, the City of Rio de Janeiro, Brazil, was threatened by an even worse situation.

On May 11 last, the Rio de Janeiro Fire Department issued instructions through the press that if the strike of telephone system employes which began the night before continued and the system failed, the public should have the local church bells rung for an alarm of fire. Police radio cars also were instructed to use their radio transmitters to call the central fire station.

At the conclusion of the first day of strike, there had been no appreciable effect on the normal service of the city. The telephone company said more than half the technical workers had reported for duty and that was sufficient to maintain service.

At last reports, the fire department was still on the anxious seat.

Thanks—LARRY FEIHEL

* * * * *

From the World News Ticker

In Mexico City, at least 12 persons died on May 4 when sparks from an electric circuit-breaker touched off chemical solvent that erupted from a 2,500-gallon tank of thinning fluid. . . . A chain series of blasts leveled the Hudson Fireworks Co. plant in Hudson, Ohio, early on May 4, 1955, causing damage estimated at $500,000. . . . At Port Hawkesbury, N. S., the 20-car ferry boat "John Cabot" was destroyed by fire while at her dock. There were no casualties. Ship was sunk at her berth to extinguish flames which threatened four nearby oil storage tanks. . . . Fire broke out April 28 in the Sainte Chapelle, one of the most notable monuments of Paris. The blaze was quickly extinguished, but about 20 yards of the roofing was damaged. The chapel, built by Louis IX to house the holy relics brought back from the Crusades, contains some of the most precious stained glass in existence. . . . Reports of a "flaming green fireball—large as a city block" flashing over Portland, Ore., March 9 last, caused switchboards in fire, police and newspaper offices to light up, as anxious citizens sought the reason for the phenomenon. The object streaked across the sky at "fantastic speed," bringing most of the inquiries from the east side of the city, and Vancouver, Wash. Thus far, no solution advanced—no fire, no explosion, no bomb. . . . The Navy reportedly is probing a fire that caused damage of undetermined extent to a cruiser undergoing conversion into a guided missile vessel in the N. Y. Shipbuilding Corp. yards in Camden, N. J. Blaze started the night of March 28 in wood staging at a ventilation intake in the hold of U.S.S. "Boston," spread into a radar room and then onto upper decks, before being con-

PROVEN TOUGH and STURDY

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DEPENDABLE—

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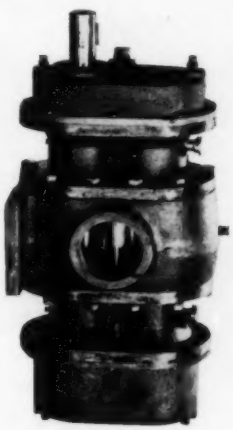

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Easy to install . . . rugged and sturdy to the extreme! Leonard Rotary Gear Pumps are guaranteed. Deliver 150 GPM at 150 pounds.

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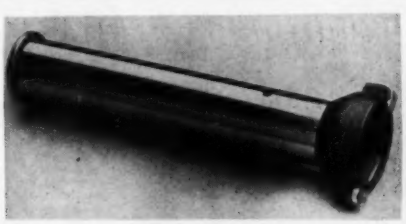

FOAM FIRE FIGHTING . . . with UNOX adapter nozzle

● UNOX foam adapter nozzles are available for all popular fog nozzles. They snap onto your present nozzle, without requiring alterations or adjustments of any kind. They give you greater fire fighting efficiency by utilizing UNOX penetrant in its most effective form—a foam that blankets the fire, spreads rapidly and cools instantly. Extinguishment occurs in a matter of seconds.

UNOX Foam is equally effective on Class "A" and "B" fires. It actually "piles up" on the fire to assure extinguishment. It leaves no residue—does less water damage.

Ask your distributor or write for bulletin on UNOX adapter nozzles.

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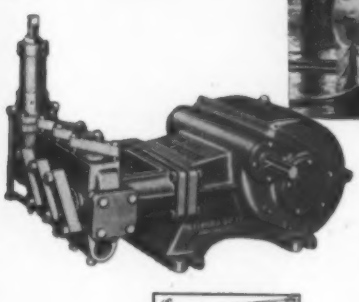
If it's fog you need...



Some fires can be brought under control more quickly with a cooling fog spray than with a high volume stream.

Many manufacturers of today's fire-fighting equipment install a Myers Bulldozer Fire Pump to provide the dependable high pressure required to produce effective fog.

Write today for an illustrated catalog of the complete line of Myers Bulldozer Fire Pumps.

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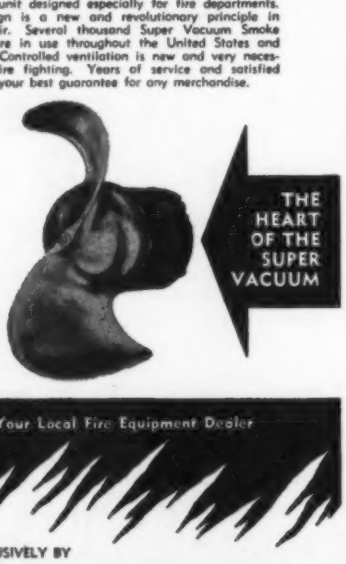
Revolutionary New Principle Increases Fire-Fighting Efficiency!

● The Super Vacuum Smoke ejector is a powerful portable fan unit designed especially for fire departments. This design is a new and revolutionary principle in moving air. Several thousand Super Vacuum Smoke ejectors are in use throughout the United States and Canada. Controlled ventilation is new and very necessary in fire fighting. Years of service and satisfied users are your best guarantee for any merchandise.



● The secret of Super Vacuum is the patented fan blade. Conventional fans chop the air and push it back. Whereas the Super Vacuum fan blade is a perfect spiral air screw which creates a partial vacuum, suction is created over the entire face of the blade and the air or smoke is discharged in a high velocity spiral. There are no dead spots—that is why Super Vacuum outperforms other fans twice its size.

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trolled. City Fire Chief William Van Pfefferle said damage was "considerable." . . . The House of Representatives voted $5,845,595,375 to operate some 15 independent federal agencies March 30 last, and in a surprise move voted to authorize Civil Defense Administrator Val Peterson to divert $30 million earmarked for emergency supplies and equipment to the purchase and distribution of instruments for detecting atomic fall out. Peterson said devices sell for about $67. Lot of fire chiefs wish some of that $30 million would be allocated for reserve fire fighting equipment. . . . New York City has a number of "bomb nuts" scattering phone "bomb false alarms" throughout the city. Latest threat to blow up Radio City Music Hall brought 60 police and firemen on the double. They searched for 90 minutes following anonymous phone call to the "Herald-Tribune." A fire engine, along with the P. D. bomb-truck, was posted at the Music Hall, but the program was not interrupted.

Persons in the News

Fire Officers Receive Civic Awards at Merced

Joe Crotti, Deputy City Fire Chief, was recently named outstanding Young Man of the Year at the annual Bosses Night banquet in the Joaquin Club, Merced, Calif. A new award for "best boss" of the year was given Crotti's superior, Fire Chief George Coolures.

The dinner was sponsored by the Merced Junior Chamber of Commerce. Crotti is the first member of the Junior Chamber of Commerce to win the honor in the local organization's five years of existence.

Deputy Chief Joe Crotti (left) and Chief George Coolures

Crotti was selected for his multiple activities on a civic, fraternal and business level, according to the committee.

It was noted that Crotti, through his activities in fire prevention work, made a definite decrease of fire insurance rates for Merced; he went through the ranks to become assistant fire chief; and he was a leader in the junior chamber's "get out the vote" campaign during elections.

Crotti is active in the Knights of Pythias, Merced Elks, Vice President of the Merced Numismatics Society, California State Firemen's Association, San Joaquin Valley Firemen's Association, National Fire Protection Association and the International Association of Arson Investigators.

He was chairman of the Jaycee Fire Prevention Week and chairman of the Jaycee voter registration committee. He

supervised the muscular dystrophy drive, and was a representative of the city employees on the United Givers Plan and a member of the Merced Red Cross fund drive. He is a Red Cross instructor, and a past president of the sick and welfare committee of the Merced Fire Department Relief Association.

Crotti also is president of the Merced City Employees Credit Union, Boy Scouts firemanship counselor and assistant director of the fire service of the Merced City Civil Defense. He assisted in forming mutual aid plan between Merced and the Castle Air Force Base, and aided in gathering and distributing Christmas toys to the needy. He was a member of the spring cleanup committee of the Merced Chamber of Commerce, and chairman of the firemen's blood reserve fund for the Valley Blood Bank.

Coolures was selected as the top boss of the year primarily through a letter of recommendation by Crotti.

It said in part:

"He (Coolures) is a fair, impartial, and understanding boss. He is ever willing to give encouragement to members of the department when it is needed and has the department's interest and welfare always at heart. He is a man of high integrity and vitally interested in the community, its civic and communal activities. . . ."

William Daly Named Buffalo Commissioner

William M. Daly is the new Commissioner of the Buffalo, N. Y., Fire Department.

Commissioner Daly was named by Mayor Pankow to the $12,000-a-year post and confirmed by the city's common council. Chief Daly had been acting commissioner since early in January, when he was named to replace Charles W. Halloran, who resigned to become first deputy state industrial commissioner.

Commissioner Daly, 57, has been a member of the department since July 1, 1916. He was promoted to lieutenant on Aug. 1, 1926; captain, April 1, 1933; battalion chief, Oct. 1, 1941, and deputy commissioner on Jan. 4, 1954.

PAUL DITZEL

Chief F. E. Tiedeman Retires

After fifty years of continuous service, Chief Frank E. Tiedeman has tendered his resignation as head of the Gloversville, N. Y., Fire Department, effective May 7, 1955.

He was appointed a call man March 6, 1905; paid fireman, Jan. 8, 1906; assistant chief, Dec. 15, 1914, and promoted to Chief on Feb. 7, 1939.

Joseph N. Sullivan Retires

Safety Commissioner Joseph N. Sullivan, Sr., of Utica, N. Y., terminated his long career in the Fire Department of that city when he tendered his resignation, to become effective on May 1.

He had served the city in various capacities over the past 44 years.

Best known to the fire service as the progressive Chief of the Utica Fire Department, Chief Sullivan rose through the ranks to take the helm about thirty years ago. In 1929 he was elected president of the International Assocation of

BAR-WAY COUPLINGS...

For booster and high pressure fog lines

There are four good reasons why the fire fighters specify BAR-WAY couplings. Four reasons why BAR-WAY couplings are growing in favour with firemen, hydraulic engineers and others who insist on the best.

- **SAFETY**—The coupling becomes the *strongest part of the hose line.* Tested to 3000 pounds pressure and 500 pounds pull.
- **FULL FLOW**—No suppression of flow in coupling. No shrinkage of hose at coupling.
- **FLEXIBILITY**—Reels smoother. Easily replaced. Nothing to catch on corners or underbrush.
- **BETTER MADE**—Accurately machined, always the same, interchangeable. WILL NOT FAIL.

Send for our free pamphlet. Gives detailed specifications for all types of pressure hose, ID and OD.

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ONE MAN FIRE DEPARTMENT **FIRE** WORLD'S BEST FIRE FIGHTER **PUMPS**

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HALPRIN SUPPLY CO.

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Oil Reservoir — Filled through pipe plug in bonnet — assures positive lubrication of stem threads.

Dry Top Design — Prevents freezing of stem threads.

"O" Ring Seals — Make permanent water-tight seal around stem.

Breech Locked Nozzles — Interlocking lugs prevent blowout.

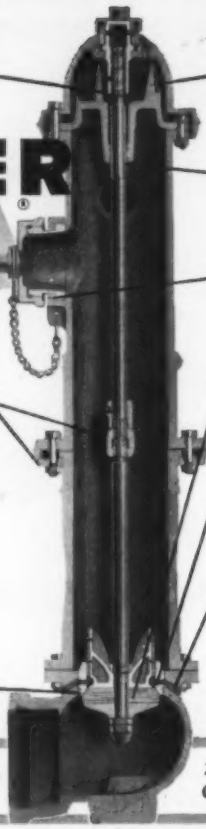
Compression-type Main Valve — Closes with water pressure.

Double Drain Valves — Integral part of main valve assembly.

Double Drain Openings — Force flushed each time hydrant is operated.

Safety Stem Coupling and Safety Flange — Coupling and flange break on impact, preventing damage to stem and barrel. Permits convenient facing of nozzles. Extension sections may be added or upper barrel may be changed from two-way to three-way hydrant without digging or water shut-off.

Bronze Seat Ring — Straight threads for easy removal.



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CITY • RURAL • FOREST

MODEL 6600 PUMPER—Instantly Self-Priming—No waiting when seconds count

HIGH PRESSURE—Use one or two hard-hitting streams or fire-blanketing fog-spray

LIGHT WEIGHT—Easily carried to source of water or fire area

NEOPRENE IMPELLERS—Pump dirty water as well as clean water—assure long life

POWER—Efficient 4-cycle, air-cooled 5 HP engine known and serviced world-wide

BY-PASS VALVE, SPRING LOADED GREASE CUP, NO LOSS OF PRIME, PLUS MANY OTHER FEATURES

UP TO 40 GPM AT 150 PSI

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"The greatest increase in fire hose sales"

200 cities can't be wrong!

MUNICIPAL—UNDERWRITERS
MILL — LINEN — FLEX — and that amazing DACRON

BLAZE GUARD MFG. CO.
NORTH BERGEN, N. J.

BLAZE GUARD
FIRE HOSE

Two Californians Meet in Washington

On April 19, 1955, Chief Keith E. Klinger, of the Los Angeles County Fire Department (he also holds the titles of Forester and Fire Warden) appeared before the Senate Subcommittee on Appropriations at Washington to request funds for better fire protection for the four National Forests in Southern California. While in Washington he had opportunity to visit with another well-known Californian—Vice President Richard M. Nixon, shown at the right in the picture above.

Fire Chiefs, and presided at the conference held in Havana, Cuba, in 1930.

He was subsequently appointed Commissioner of Public Safety in Utica, where he served with distinction.

Slaman Surprised on His 25th

Fire Chief Tom Slaman, Wellesley, Mass., was tendered a surprise party by local Kiwanians and guests Thursday noon, April 28, in honor of his 25th anniversary as head of the Wellesley Fire Department.

The party was held at the Wellesley Inn. Guests included prominent local and other celebrities. Lieutenant Governor Sumner Whittier of Massachusetts was guest speaker and he presented the Chief with an illuminated scroll signed by all present. Among the other gifts was a silver Revere Bowl.

There was also a tremendous cake adorned with fire fighters' gear, boots, hats, etc., and a huge floral piece. The guests were all attired in fire hats.

The chief is a former head of the New England Association of Fire Chiefs, and presently a member of the board of directors. He is also active in numerous other fire service organizations.

Lloyd Colson Named Signal Hill Chief

Lloyd S. Colson, Jr., is the new fire chief of the Signal Hill, Calif., Fire Department. Colson, who had been acting chief for a month, replaced Ray A. Jenkins, who resigned.

PAUL DITZEL

Buff Made Honorary Troy Chief

Raymond C. Henry, prominent fire buff of Troy, N. Y., was named honorary battalion chief, May 13, 1955, in a ceremony at the office of Mayor Edward Fitzgerald. He was also presented a gold badge and a gift scroll, giving tribute to his years of faithful service to the city in the role of volunteer fireman, in fire prevention and fire safety education. Present also was Fire Chief Carl A. Smith, Public Safety Director John J. Givney, and Lt. Edwin A. Ruff of the Uniformed Firemen's Association. —C. V. GURKA.

Photo by Wm. J. Scott

Prominent Fire Fighters View Yucca Flats Bomb Tests.

Two of the many fire officers who attended the spring bomb tests at Yucca Flats, Nev., during May, Chief Lloyd Layman (left), Director, Fire Division, Federal Office of Civil Defense, and Chief Ray Tiller, Waterloo, Iowa, member of the Board of Directors, International Association of Fire Chiefs.

Brownlie Heads Firemen's Group

Ed Brownlie has been installed as president of the 46-member Compton, Calif., Firemen's Association. Other new officers include: Eugene Palmer, vice president; Dan Doty, treasurer, and Henry Block, secretary. They were installed at a banquet in May.

PAUL DITZEL

Obituaries

Ex-Chief C. W. Ringer Dead

Charles W. Ringer, former Chief of the Minneapolis, Minn., Fire Department, died on May 22 at the age of 94.

He entered the Minneapolis department in 1884; became a lieutenant in 1889; a captain in 1896 and fire marshal in 1902. On January 1, 1911, his fiftieth birthday, he was named Chief of the Department, a position he held until his retirement in 1933.

Chief Ringer served as President of the International Association of Fire Chiefs in 1922-1923.

Glenn Parish Dead

Glenn Parish, for twenty-seven years a field engineer of the American-La-France-Foamite Corporation's Chicago branch, died March 4 of this year. He was born in Fairbury, Neb., on July 5, 1898.

A resident of Hobart, Ind., for several years, he was active in many community and fraternal organizations.

Fire Captain Dies in Action

Fire Captain Oliver Fraley, 55, of No. 5 Company, Wilkes-Barre, Pa., Fire Department, died from injuries received while fighting a general alarm blaze in a plumbing supply store on So. Main street, Wilkes-Barre, April 26th, last.

Capt. Fraley, a veteran of 31 years in the department, was off duty at the time of the first alarm but responded to the general alarm and was directing operations from the roof of a one-story garage in the rear of the plumbing store when he toppled over the small ledge on the roof, 12 feet to the ground. He was rushed to the hospital but succumbed later from what were believed to be internal injuries.

TIME IS EXPENSIVE IN AN EMERGENCY!

That's why Globe has been building "time savings" into every garment. The original 8-inch "Quick Hitch" is just one time saver . . . and every Globe Suit saves time, in many extra and improved features.

GLOBE SUITS ARE ABSOLUTELY GUARANTEED!

They insure a long, serviceable life, and maximum protection when you need it most.

GLOBE SUITS are constantly being improved. When new materials offer better wear, longer service and greater safety — GLOBE will *lead* in using them. The use of 100% DuPont Neoprene in making the interlining is one example.

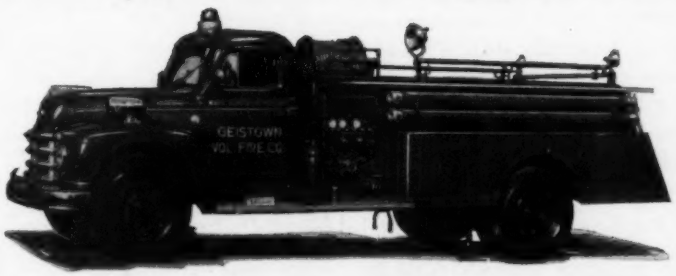
See all the Globe Suits at your dealers . . . or write for your copy of our latest catalog.

STANDARD SINCE 1901

GLOBE SUITS

GLOBE MANUFACTURING CO. PITTSFIELD, N.H.

Champion Fire Apparatus



A highly efficient pumper apparatus with the Champion Three Stage Centrifugal Pump powered by Diamond T. The Pump is the Type SH750 which delivers 750 gallon Underwriter performance plus 60 gallons per minute at 850 lbs. for high pressure fog.

Or this Darley Apparatus is also available in Underwriter capacities of 1000 GPM and 500 GPM. Modern commercial truck motors have adequate power for either 1000, 750, 600 or 500 GPM pumps.

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AT YOUR SERVICE: Sales and Service Representatives—East, Midwest, North, South

CM-7

(Replaces Carbon Tetrachloride)

New Vaporizing Liquid Fire Extinguishing Agent offers New Values for the Attack of Incipient Fires and—

GREATER SAFETY FOR FIREMEN!

- **CM-7 inhibits the formation of carbon monoxide when applied to fire, producing instead carbon dioxide.**
- **Phosgene gas cannot result from the application of CM-7 to a fire.**
- **CM-7 produces 10% to 20% more fire-stopping vapor than carbon tetrachloride.**
- **CM-7 boils at 152.5°F, vaporizes quickly.**
- **Penetrates embers of Class A fires more deeply than any other commonly used vaporizing liquid.**
- **Leaves a residual fog over the fire area that guards against flashback.**

CM-7 is an entirely new chemical. It was invented by I. N. Beall for the Beall Research and Engineering Corporation after approximately two years of intensive research and laboratory tests. Safer CM-7 is more effective in stopping fires while small than any other commonly used extinguishant.

CM-7 is marketed exclusively by RED COMET, INC., Littleton, Colorado, in their "fast action" fire extinguishers.

For additional information, write to

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Member: National Fire Protection Association

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Convention Dates

June 20-22—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field in Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

June 20-23—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting, Wentworth-by-the-Sea, Portsmouth, N. H. Secretary-Treasurer, John W. O'Hearn, 206 Mt. Auburn Street, Watertown, Mass.

June 20-23—NEW ENGLAND DIVISION, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Wentworth Hotel, Portsmouth, N. H. Secretary-Treasurer, Chief A. H. Koltonski, Fire Headquarters, Rutland, Vt.

June 20-24—PENNSYLVANIA FIRE SCHOOL. Standard Fire Fighting Course, to be held at new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

June 20-24—FIRE AND ARSON INVESTIGATION SHORT COURSE. To be held at the University of California, Berkeley, Cal. Director, T. S. Ward, Supervisor of Fire Training, State Department of Education, Sacramento, Cal.

June 20-25—MISSISSIPPI STATE FIRE SCHOOL. Annual meeting, State College, Miss. Director, Joseph I. Fetters, Administrative Assistant, University of Missouri, Columbia, Mo.

June 22—CENTRAL WESTERN FIREMEN'S CONVENTION. Annual meeting, Eaton, Ohio. Secretary, Don Campbell, 613 N. Cherry Street, Eaton, Ohio.

June 23-24—SASKATCHEWAN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Weyburn, Sask. For information, contact Chief, G. M. Beach, Weyburn, Sask., Fire Department.

June 27-29—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field in Marinette, Wis. For information, contact Director, Fire School, Ansul Chemical Company, Marinette, Wis.

June 27-July 1—FIRE AND ARSON INVESTIGATION SHORT COURSE. To be held at the University of California, Los Angeles, Cal. Director, T. S. Ward, Supervisor of Fire Training, State Department of Education, Sacramento, Cal.

July 1-3—INTERNATIONAL FIRE BUFF ASSOCIATES, INC. Annual meeting, Chicago, Ill. Secretary, E. R. Damaschke, 915 W. Marshall Av., Ferndale 20, Mich.

July 10-15—TEXAS FIREMEN'S TRAINING SCHOOL. Annual meeting, Texas A. & M. College, College Station, Tex. Director, H. R. Brayton, Engineering Service, A. & M. College, College Station, Tex.

July 11-12—GEORGIA STATE FIRE COLLEGE. Arson Investigation Course, Atlanta, Ga. Director, Harry Phillips, Director, Vocational Service, State Department of Education, 642 Killian Street, Atlanta, Ga.

July 11-15—PENNSYLVANIA FIRE SCHOOL. Advanced Fire Fighting Course, to be held at new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Department of Public Instruction, Public Service Institute, Box 911, Harrisburg, Pa.

July 11 to Aug. 12—FLORIDA STATE FIRE COLLEGE. Second of two sessions, Ocala, Fla. Director, W. H. Barnett, Superintendent, Florida State Fire College, P. O. Box 785, Ocala, Fla.

July 12-15—LOUISIANA STATE FIRE MARSHAL'S ARSON AND FIRE PREVENTION CONFERENCE. Annual meeting, New Orleans, La. For information, contact Sidney S. Bowman, Louisiana State Fire Marshal, New Orleans 16, La.

July 12-15—MICHIGAN STATE FIRE CHIEFS ASSOCIATION. Annual meeting, Port Huron, Mich. Secretary, Chief Harry L. Ridout, Fire Headquarters, Muskegon Heights, Mich.

July 16-17—DELAWARE SHORT COURSE FOR FIREMEN. First session, Camden-Wyoming, Dela. Director, Frank M. Forstburg, Delaware State Board for Vocational Education, 511 West 8th Street, Wilmington, Dela.

July 17—VERMONT STATE FIRE FIGHTERS TRAINING SCHOOL. Regional meeting, Bennington, Vt. Director, W. H. Adams, Secretary-Treasurer, State Fire Fighters Association, Vergennes, Vt.

July 18-20—ARKANSAS STATE FIRE DEPARTMENT INSTRUCTORS TRAINING SCHOOL. Annual meeting, Little Rock, Ark. Director, W. A. Turner, State Fire Instructor, State Education Building, Little Rock, Ark.

July 18-20—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field in Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

July 20—EGYPTIAN FIRE FIGHTERS ASSOCIATION. Thirtieth anniversary meeting, Carlyle, Ill. Secretary, George H. Holmes, Carterville, Ill.

July 23—INTERNATIONAL FIREMAN'S DAY. Annual meeting, Gananoque, Ont. Secretary, Gerald F. Hampton, Gananoque, Ont.

July 23-24—DELAWARE SHORT COURSE FOR FIREMEN. Second session, Camden-Wyoming, Dela. Director, Frank M. Forstburg, Delaware State Board for Vocational Education, 511 West 8th Street, Wilmington, Dela.

July 25-27—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field, Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

July 25-29—WEST VIRGINIA STATE FIRE SCHOOL. Annual meeting, West Virginia University, Morgantown, W. Va. Director, R. E. Hanna, Jr., Supervisor, Fire Service Extension Schools, West Virginia University, Morgantown, W. Va.

July 26-28—CENTRAL MISSOURI FIRE CONFERENCE. Annual meeting, University of Missouri, Columbia, Mo. Director, J. I. Fetters, Room 101, Building T-11, University of Missouri, Columbia, Mo.

July 29-Aug. 1—THE FIREMEN'S ASSOCIATION OF ONTARIO. Annual meeting, Falls View (Niagara Falls), Ont. Secretary, E. O. McNeely, 141 Brownville Avenue, Toronto 9, Ont.

July 30-31—OHIO REGIONAL FIRE SCHOOL. To be held at Amherst, Ohio. Director, Walter T. Banning, 606 Fourth Street, N. W., New Philadelphia, Ohio.

Aug. 1-5—PENNSYLVANIA FIRE SCHOOL ROUND-UP. Annual meeting, new Pennsylvania Fire School, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Aug. 2-5—IOWA STATE FIRE INSPECTORS SCHOOL. Annual meeting, Iowa State College, Ames, Ia. Director, Mark H. Brosier, Supervisor of Firemanship Training, 110 Marston Hall, Iowa State College, Ames, Ia.

Aug. 7—VERMONT STATE FIRE FIGHTERS TRAINING SCHOOL. Regional meeting, St. Albans, Vt. Director, W. H. Adams, Secretary-Treasurer, State Fire Fighters Association, Vergennes, Vt.

Aug. 8-9—GEORGIA STATE FIRE COLLEGE. Engineers Course, Atlanta, Ga. Director, Harry Phillips, Director Vocational Service, State Department of Education, 642 Killian Street, Atlanta, Ga.

Aug. 8-12—PENNSYLVANIA FIRE SCHOOL. Fire Service Instruction Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Aug. 11-13—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Annual meeting, Bethel, Conn. For information, contact the Bethel Fire Department.

Aug. 15-17—WISCONSIN FIRE SCHOOL. Annual meeting, University of Wisconsin, Madison, Wisc. Director, J. J. Lichty, Coordinator, Business Institutes, University of Wisconsin, Box 2098, Madison, Wis.

Aug. 15-17—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field, Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

Aug. 18-20—OHIO FIRE CHIEFS ASSOCIATION. Annual meeting, Toledo, Ohio. General Chairman, Chief A. F. Papenhagen, 545 North Huron Street, Toledo 5, Ohio.

Aug. 19-20—OHIO STATE FIREMAN'S ASSOCIATION. Annual meeting, Cincinnati, Ohio. General Chairman, Chief Robert A. Metz, 3673 Eyrick Road, Mack, Ohio.

Aug. 21-23—NEW YORK STATE PERMANENT FIREMEN'S ASSOCIATION. Annual meeting, Auburn, N. Y. Secretary-Treasurer, Robert E. Mills, 420 Plymouth Drive, Syracuse 6, N. Y.

Aug. 22-24—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field, Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

Aug. 22-26—TENNESSEE STATE FIRE SERVICE SCHOOL. Annual meeting, Mid-Tennessee State College, Murfreesboro, Tenn. Director, Homer S. Elkins, State Fire Service Instructor, 120 Cordell Hull Building, Nashville, Tenn.

Convention Dates

Aug. 22-26—PENNSYLVANIA FIRE SCHOOL. Fire Apparatus Operation and Maintenance Course to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Aug. 24-27 — MONTANA STATE FIRE SCHOOL. Annual meeting, Polson, Mont. Director, Chief Clayton Brown, Fire Headquarters, Polson, Mont.

Aug. 29-31—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field in Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

Sept. 5-6—GEORGIA STATE FIRE COLLEGE. Inspectors Fire Prevention Course, Atlanta, Ga. Director, Harry Phillips, Director Vocational Service, State Department of Education, 642 Killian Street, Atlanta, Ga.

Sept. 6-9—MARYLAND SHORT COURSE FOR FIREMEN. Annual meeting, University of Maryland, College Park, Md. Director, Robert C. Byrus, Director of Fire Service Extension, Box 85, University of Maryland, College Park, Md.

Sept. 9-10—NORTHEASTERN PENNSYLVANIA VOLUNTEER FIREMEN'S FEDERATION. Annual meeting, Peckville, Pa. Secretary, E. V. Coleman, Pleasant Avenue, Peckville, Pa.

Sept. 9-10—JEFFERSON COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting and tournament, Cape Vincent, N. Y. Secretary, Lewis Z. Horr, Great Bend, N. Y.

Sept. 10 & 17—VOLUNTEER FIREMEN'S FIRE TRAINING SCHOOL, sponsored by the Alert Firemen's Association, to be held at Lansing, Mich. Secretary, Fire Marshal Archie Burghdoff, 3289 Eaton Rapids Road, Lansing, Mich.

Sept. 11-15—FIREMEN'S ASSOCIATION OF THE STATE OF NEW YORK. Annual meeting, Lake George, N. Y. For information contact the organization at the Hotel Martinique, Broadway at 32nd Street, New York 1. N. Y.

Sept. 12-14—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field, Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

Sept. 12-15—CANADIAN ASSOCIATION OF FIRE CHIEFS. Annual meeting, on board C. S. L. "St. Lawrence." Secretary-Treasurer, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

Sept. 12-16—VIRGINIA STATE FIRE SCHOOL. Annual meeting, Norfolk, Va. Director, Clay A. Easterly, Fire Marshal, P. O. Box 1112, Martinsville, Va.

Sept. 12-16—OHIO FIRE STATE FIRE SCHOOL and OHIO STATE ARSON SCHOOL. Annual meeting, Ohio State University, Columbus, Ohio. For information, contact Wayne C. Jenkins, Assistant Director, 111 Wyandotte Building, 21 W. Broad Street, Columbus, Ohio.

Sept. 12-16—PENNSYLVANIA FIRE SCHOOL. Standard Fire Fighting Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Harrisburg, Pa.

Sept. 13-14—IOWA FIREMEN'S ASSOCIATION. Annual convention and tournament, Grinnell, Ia. Secretary, Carl H. Fuchs, 2749 Kinsey Avenue, Des Moines, Ia.

Sept. 13-16—INDIANA STATE FIRE SCHOOL. Annual meeting, Purdue University, Lafayette, Ind. Director, Francis W. Hartman, Chief of Fireman Training, Purdue University, Lafayette, Ind.

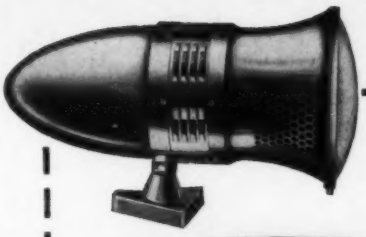
Sept. 13-16—PACIFIC COAST INTER-MOUNTAIN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Sun Valley, Ida. Secretary-Treasurer, Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

September 18—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual meeting, Omaha, Neb. Secretary-Treasurer, Chief Elmer Stough, 605-4th Street, Lorain, Ohio.

Sept. 18-22—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual meeting, Omaha, Neb. Secretary-Treasurer, Chief Ray Tiller, 310 East 5th Street, Waterloo, Ia.

Sept. 19-21—ANSUL FIRE SCHOOL. To be held at the Ansul Chemical Company's test field in Marinette, Wis. For information, contact Director Fire School, Ansul Chemical Company, Marinette, Wis.

Sept. 19-22—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Omaha, Neb. For further information contact Chief Daniel B. Tierney, Secretary-Treasurer, 8 Robbins Road, Alington 74, Mass., or the Headquarters Office, Hotel Martinique, Broadway at 32nd Street, New York 1, N. Y.



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Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

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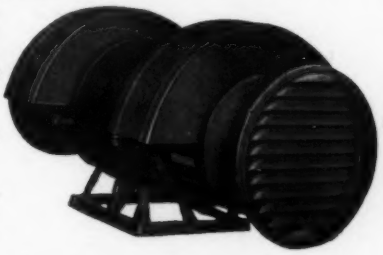
Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.



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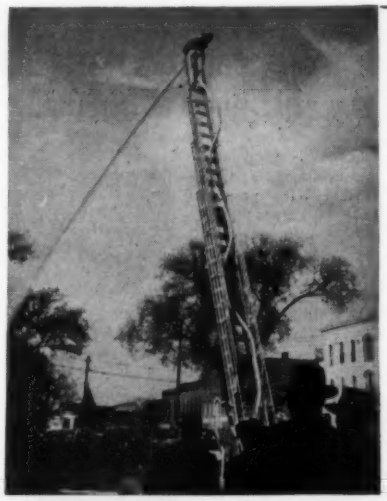

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designed to materially increase the efficiency of your fire service—*even in the small community*—the Memco fits into any department, and is priced so that your own department can afford one.

Electrically operated by power from the truck battery—it can be installed on one of your present trucks, or incorporated into a new combination by your fire truck manufacturer.

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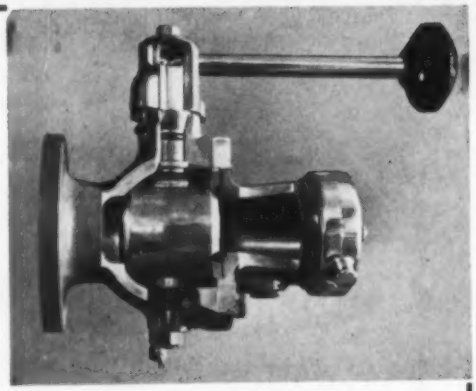
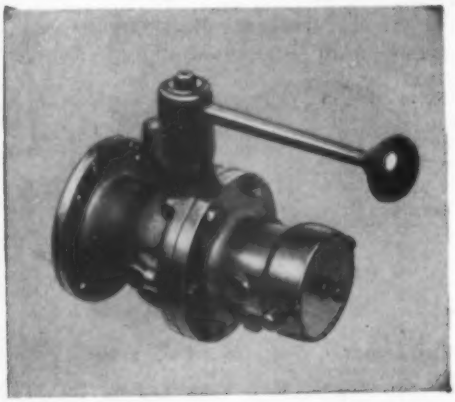
apparatus shown below built by W. S. Darley Co., Chicago, for Home Hook & Ladder Co., Thibodaux, Louisiana

HALE TYPE "BL" Discharge Valve

...This popular HALE ball-type BL VALVE is not only furnished on new HALE Pumps, it is also available for easy installation on practically ALL Hale Fire Pumps now in service, regardless of age. Available in 2½" size only.





Above — View of BL Valve cut away to show internal construction. Valve is in open position with cap on.

NOTE: New revised Bulletin #293 now available covering complete details. Send for yours today!

HALE
Fire Pump Co.
CONSHOHOCKEN, PA.

Hale Fire Pumps are built in all standard capacities.

Convention Dates

Sept. 25-30—CALIFORNIA STATE FIREMEN'S ASSOCIATION, INC. Annual meeting, Avalon, Santa Catalina Island, Cal. Secretary, E. L. Albrecht, St., 1320 N Street, #301, Sacramento 14, Cal.

Sept. 26-29—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Rochester, N. Y. For information, contact the Association at 130 West 42nd Street, New York 36, N. Y.

Sept. 26-30—PENNSYLVANIA FIRE SCHOOL. Advanced Fire Fighting Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Oct. 10-14—PENNSYLVANIA FIRE SCHOOL. Fire Apparatus Operation and Maintenance Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Advisor, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

October 11—MAINE ASSOCIATION OF FIRE CHIEFS. Annual meeting, Lewiston, Me. For information, Contact Chief Z. F. Drouin, Fire Headquarters, Lewiston, Me.

Oct. 17-19—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Grand Island, Neb. Secretary-Treasurer Russel D. Salak. Box 312, Schuyler, Neb.

Oct. 17-20—KANSAS FIRE SCHOOL. Annual meeting, University of Kansas, Lawrence, Kans. Director, Gerald Pearson, Director of Extension Classes, University of Kansas, 111 Fraser Hall, Lawrence, Kans.

Oct. 17-21—PENNSYLVANIA FIRE SCHOOL. Standard Fire Fighting Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Oct. 20-22—ARIZONA STATE FIRE TRAINING SCHOOL. Annual meeting, Phoenix, Ariz. For information, contact Battalion Chief Jake Siken, Fire Fighting Instruction Supervisor, Phoenix Fire Department, Phoenix, Ariz.

Oct. 24-28—PENNSYLVANIA FIRE SCHOOL. Advanced Fire Fighting Course, to be held at the new Pennsylvania Fire School building, Lewistown, Pa. For information, contact Edgar A. Spotz, Adviser, Fire Service Training, Public Service Institute, Box 911, Harrisburg, Pa.

Oct. 27-29—INTERNATIONAL FIRST AID AND RESCUE ASSOCIATION. Annual meeting, Alexandria, Va. For information, contact International Association of Rescue and First Aid Squads, P.O. Box 2098, Potomac Station, Alexandria, Va.

News of the Manufacturers

(*Continued from page* 532)

Assistant Chief of the Base Fire Department. He subsequently served with the First Air Force as Fire Protection and Fire Prevention Engineer.

In his new post, Chief McCoy will direct technical activities of the Fyr-Larm Co., Inc., manufacturer of self-powered, automatic fire alarms for use in residential, industrial and institutional type buildings.

The units are approved by the Underwriters' Laboratories, Inc., and a number of other national, regional and municipal safety groups.

New Link Mobile Unit Announced

Murray Platt, president of Link Radio Corp., 125 West 17th St., N. Y. 11, N. Y., has announced the addition of the new Model 2365-M-Ed. 8 mobile combination transmitter-receiver to its line of two-way radio communication equipment.

This unit, which operates in the 25-50 megacycle band (25-30 watts output), is designed to work from either a 6 or 12-volt battery without wiring, component or cable changes. The changeover is accomplished by merely shifting a

SPECIAL BINDERS AVAILABLE

Every issue of FIRE ENGINEERING has something in it that you want to keep for future reference. If you have one of our standard handy binders, you will have every article at your fingertips and a complete yearly index of everything we have published. The binder holds 24 issues and two yearly indexes.

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For nearly 50 years the craftsmen at the Janesville Apparel Company have been designing quality fire fighting apparel. This constant search for quality has led to our development of the riveted "quick-hitch" D-Ring and Snap now common on all fire coats . . . famous for rigidity and strength!

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UNIFORM CAPS

STYLE NO. 149—N. Y. REGULATION

The "HEAD-MASTER" Bell Top Fire Dept. Uniform Cap is the finest uniform cap on the market. For styling, comfort, quality and durability, order a "HEAD-MASTER." Made of 100% all wool blue serge which has been pre-shrunk and waterproofed. Built on the *original cane frame* for durability — 3-ply blocked visor with plastic binding — Genuine roan leather sweatbands.

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These low cost—foolproof fire detectors "Scream Out" a 10 minute, 95 decibel warning whistle.

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plug located on the top of the chassis. It is specifically designed to serve fire and police departments, and other operators of truck fleets.

Booster Hose by Thermoid

A new fire engine booster hose has been announced by the Thermoid Company, Trenton, N. J. It is made in two sizes, ¾-in. and 1-in. ID. It is designed for a working pressure of 800 psi. Weight of a 50-ft. length of ¾-in. size is 28 lb. and the 1-in. size, 36 lb. The new hose is available in lengths up to 250 feet.

Both sizes have a 3-braid reinforcement of rayon and a red cover compounded to resist abrasion and the harmful effects of oil and grease. Special design limits contraction under pressure to a minimum to insure safe reel operation.

Safety Code for Portable Extinguishers

The Fire Protection Institute announces publication of *"Safety Code for Inspecting, Recharging and Maintaining Portable Fire Extinguishers."* This book was prepared as a public service by the Fire Equipment Manufacturers' Association, Inc.

Many fire extinguishers are useless in an emergency, because somebody forgot them. Neglected, many without extinguishing agents, others corroded by years of abuse and disuse, they are unable to cope with the potential disaster of fire.

The seventeen member companies who belong to the Fire Equipment Manufacturers' Association have pooled their knowledge and experience to produce for the first time, an industry prepared and approved Code for inspecting, recharging, testing and maintaining all types of portable fire extinguishers. The book of 12 pages and cover measures 8½ by 11 in., is punched for binder. It should have a prominent place in every firemanship library.

These books can be obtained by writing the Fire Equipment Manufacturers' Association, 813 Clark Building, Pittsburgh 22, Pennsylvania. The cost is 50c each.

Cincinnati to Test Indirect Application of Water

On June 27, 1955, at 8:00 a.m., the Fire Department of Cincinnati, Ohio (Chief Barney J. Houston) will stage a demonstration of the indirect application of water in fire fighting.

The fire department has secured permission from the city to use the building at 115-119 West Pearl Street, a double four-story brick, heavy mill constructed building, measuring approximately 170 feet long by 100 feet wide, for the tests.

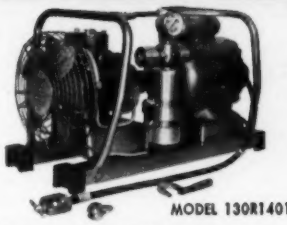
The National Exploratory Committee for the application of water will be present and will compile the records.

Visitors from the fire service are invited to attend the demonstration.

Maine Adopts Bill to Aid Firemen

Governor S. Muskie, of Maine, has signed a bill bringing under the workmen's compensation law all organized fire fighters in the state, including volunteer and call men, who are affected by pulmonary and cardiac disease six months after their participation in fires.

JACK KEARNS



MODEL 130R1401

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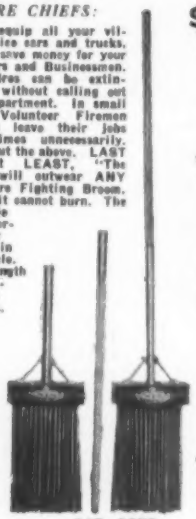
"THE KING"
Fire Fighting Broom

This is a piece of fire equipment, not just another broom.

FIRE CHIEFS:
If you equip all your village Police cars and trucks, you can save money for your Taxpayers and Businessmen. Brush fires can be extinguished without calling out your Department. In small towns, Volunteer Firemen have to leave their jobs many times unnecessarily. Figure out the above. LAST but not LEAST, "The King" will outwear ANY other Fire Fighting Broom, because it cannot burn. The detachable handle permits easy carrying in any vehicle. Actual length when connected is 58 inches.



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Short Cuts and Gadgets

BUILD A POND, SAYS FLUVANNA

A fire pond may have both utility and beauty, say Fluvanna, N. Y., firemen, who plan to develop one in the rear of the Fluvanna Fire Hall.

According to reports, the pond would be appropriately situated, fed by a natural spring, and would afford protection for a large number of buildings in the vicinity, including a branch of the Central High School located across the street from the Fire Hall.

A committee to study the plan comprises Chief Roger Phillips and Firemen Jerry Okerlund and Robert Finley.

Not every fire department, particularly among the volunteers, serving areas having no piped water supplies, may be fortunate enough to have land and other facilities for a "fire house pond" but, where they are available, such an addition offers not only water supply for fire protection, but for training in pump operation, drafting, relaying, etc. Besides this, properly adorned, the pond can be "a thing of beauty and a joy forever" to the neighborhood.

* * *

FOR WORKING IN CRAMPED SPACE

This one we picked from *Popular Mechanics* of February, 1955. It reminded us of the time that the pitchfork (now, not so generally carried by fire departments) got jammed under the running board of the ladder truck and it took two or three fellows, holding flashlights, to light the task of working it free.

If you don't carry a fruit jar, perhaps a common paraffin milk container will do—in fact, any container having a hole large enough to permit passage of a normal flashlight can do the trick.

The idea may be also applied to overhauling and salvage operations.

* * *

BACK-UP BUZZER WARNING

Modern motor cars have bright back-up lights as an added safety feature to warn pedestrians when you back out of a driveway or on a street. Modern fire engine makers might take a leaf from the automakers' book and install such back-up lights on their rigs, most of which have only the plain red warning-light, or lights.

If they put on backing lights, it's easy to add a simple back-up warning buzzer, by splicing the buzzer in the wiring of one of the back-up lights. Mounted and grounded on the metal body, it'll sound off every time you back the rig.

* * *

BLOCKING WHEELS

Tire-chocks or wheel-blocks are simple things, but they can come in very handy when fire apparatus is operating on any grade.

We're reminded of this when within a single day we witnessed the Yonkers Fire Department (Chief William Garvin) operate at two three-alarm fires. Both were tenements, where aerial ladders, as well as pumpers, had to work on steep grades.

Every piece of apparatus had its wheels blocked, in addition to its brakes set. The wheel or tire-chocks consisted of cut-out wooden blocks, incidentally, painted with the colors assigned to the respective companies (yes, Yonkers identifies its hose couplings, and tools with color symbols). To prevent the chocks "getting away," they are fastened to the rear handrail, or some other handy place, by means of long, strong cords.

* * *

The Old Timer says:

You fellows at FIRE ENGINEERING have been printing a lot about markin' rural districts to show farmhouses and other hazards in the area. It's swell to have a marker out front of every farm, along the routes, which checks with a key-man at fire headquarters, and on the fire rigs, but has it ever occurred to you folks that lots of times the markers are made of wood—and when farmers burn off their ditches, or yards, said markers go up in smoke?

* * *

CHIMNEY FIRE EXTINGUISHER USES WET WATER

Fire Chief Carl L. Peters of the West Bend, Wis., Fire Department, has come up with a "gadget" for an improvement in fire extinguishers for fighting chimney fires that is well worth passing along to our readers.

Chief Peters writes: "Last summer I got an idea about a pressurized fire extinguisher, using wet water and discharging it in the form of fog.

"I passed this idea on to our Engineer, who made it, using a truck-type or fire department S. A. 2½ gal. extinguisher.

"The old cap, of course, could not be used, so he made a pattern from which a cap was cast out of brass. On this cap was mounted a pressure gauge and a valve stem for filling the extinguisher with air at 100 P.S.I. or more. On the outlet tube a ¼-in. valve was fitted, and to it fastened a 15-ft. length of ¼-in. hose, with a shut-off nozzle with fog tip.

Chimney fire extinguisher.

McINTIRE GATE VALVES

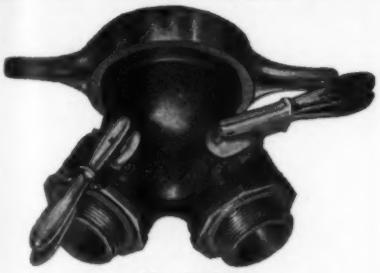

Fig. 164AN

4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

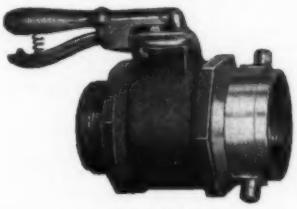

Fig. 163

Made either Right Hand or Left Hand 2½" male x female, gate valve.

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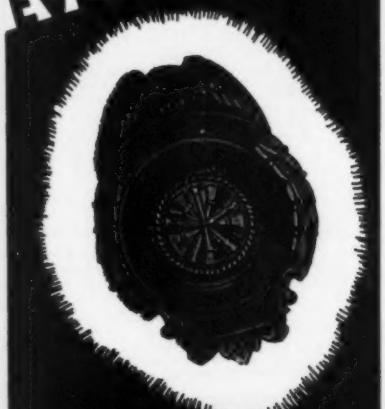
Firemens BADGES by EVERSON-ROSS



Write For Folder

EVERSON-ROSS

88 CHAMBERS ST NEW YORK 7 N Y

"The enclosed picture shows all the details. It was used the past winter on chimney fires and found to be very effective. It throws a fog from 10 to 15 feet and is used in the clean-out or smoke pipe opening in the chimney. It takes from 2½ to 3 min. time to discharge it.

"This extinguisher could also be used on small fires in walls."

Thank You—CHIEF PETERS.

* * *

CHICAGO FIREMEN USE 'CATCH BAGS'

This idea comes from correspondent Stan Helberg of Chicago, who spotted it while visiting a Chicago Fire Station. He writes:

"Often in their haste to get lines into operation, especially first-arriving engines at a spreading fire, fire fighters cannot give their equipment the 'kid glove' treatment it normally gets. One source of abuse, for example, is the handling of pump outlet caps which, when dropped, bang against the apparatus body, resulting in nicks and chipping of the paint.

Photo by Stan Helberg

Bag for pump outlet cap protects pumper's finish.

"Captain Callahan of Chicago's Engine 101 has developed and installed novel canvas 'catch bags' on his pumper. Each bag is located about six inches directly under a pump outlet and is secured by the screw that attaches the cap chain to the body, therefore no drilling or alterations of any kind are necessary to install the bags.

"In use, the fireman allows the cap to fall right into the open end of the bag where it cannot mar the machine. If the bags fill with water they are flexible enough to be tipped over and drained after pumping is done. Drain holes could of course be cut in the bottoms of the bags, if desired.

"While primarily devised to protect the finish of the apparatus, the bags help prevent the chainless hose-cap from becoming lost in snow or mud, particularly after dark."

Thank you, Brother Helberg.

Hawthorne Fire Rates Cut

Fire insurance rates in the city of Hawthorne, Calif., have been cut an average of 21 per cent, following a survey by the Board of Fire Underwriters of the Pacific.

The survey upped the city's classification from seventh to fifth class. Fire Chief Joy West attributed the improved rating to a better water supply and enlarged fire department facilities.

—PAUL DITZEL.

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2½" Brass double female connections, NST	5.95 ea.
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2½"x15" Plain hose nozzles, brass NST	4.25 ea.
1½" Fog nozzles, brass, 3 position, leading brands, NST or IPT	29.50 ea.

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Round Tables Feature New England Conference

The 33rd Annual Conference of the New England Association of Fire Chiefs, to meet at Wentworth-by-the-Sea, Portsmouth, N. H., June 20 to 24 inclusive, has scheduled two Round Tables and several lectures in its business and educational program.

On June 21, the topic is "Traffic Resolutions" with traffic authorities from each of the six New England States participating in the discussions. The moderator has not been announced.

On the same day addresses are scheduled by Chief Lewis A. Marshall, Providence, R. I. ("Getting the Most Out of Radio"); Chief Henry R. Thomas, Hartford, Conn. ("What the N.F.P.A. Means to the Fire Service"), and Mr. G. G. Constantino, Chief Air Pollution Inspector, Providence, R. I. ("Safeguards for Oil Burning Equipment").

On the 22nd, most of the day will be devoted to Round Table discussions of topics suggested by Association members. The "Quiz" session will be led by Chief Roi B. Woolley, Assistant Editorial Director FIRE ENGINEERING and Technical Consultant of the Association, with a panel including Chiefs Horace S. Jose, So. Portland, Me.; Napoleon Guevin, Manchester, N. H.; Richard Salamone, Needham, Mass.; John A. Laughlin, East Providence, R. I., and Chief Thomas Collins, New Haven, Conn.; also a chief to be selected from the State of Vermont.

Detroit Shops

(*Continued from page* 509)

At the northwest section are the loading docks and garage for eight line crew trucks. There are three adjustable steel loading gangplanks, raised and lowered by compressed air to fit the platform level of any type of truck. The section has six steel electrically controlled overhead doors and is large enough to house all vehicles at night.

Adjoining this section is located the General Line Foremen's Office and a briefing room for the line crews, with desk space for each line crew foreman. There also is a separate wash room for the line crews, a duplicate of that in the shop section, with showers, dressing room and lockers. And lastly here also is located a repair shop for fire station domestic furniture and fixtures, such as stoves, refrigerators, beds, disposals, electric gadgets, etc.

It is estimated there are over 12,000 different items stored and handled within this section. Eight line crews base here, and combining the personnel of the office staff, the shops, stock clerks, and handlers, emergency repair men, janitors, and watchmen, about 125 persons combine to operate the functions of this service auxiliary of the fire department.

The Detroit Fire Department Repair Shops and Supply Warehouse may not be the largest (this could be debatable), but it probably is the most complete and modern structure of its kind at this time. It could not have been built had it not been for the business foresight and understanding of our Mayor, the Hon. Albert E. Cobo, to whom everyone in the Fire Department is most grateful, and to our City Council who approved the funds. We of the Detroit Fire Department are pardonably proud of what we have.

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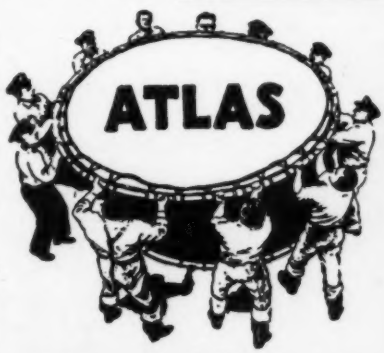

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